

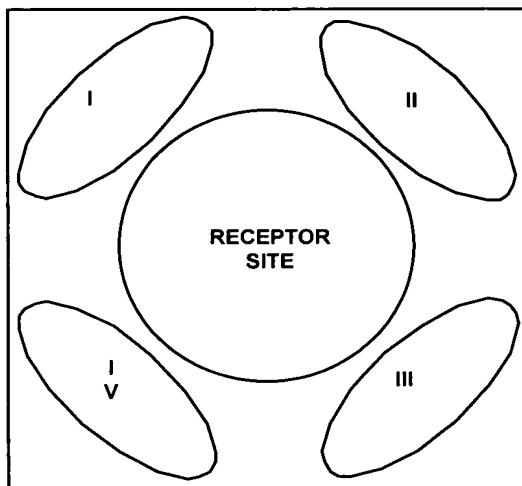


Inventor: CARLSON  
Docket No.: 14095.1USII  
Title: ARTIFICIAL RECEPTORS, BUILDING BLOCKS, AND METHODS  
Serial No.: 10/813,568  
Sheet 1 of 42

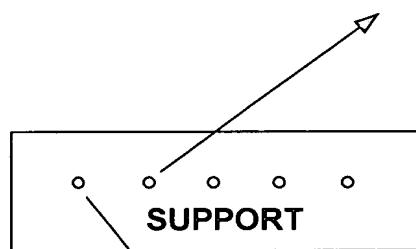
BEST AVAILABLE COPIE

FIG.1

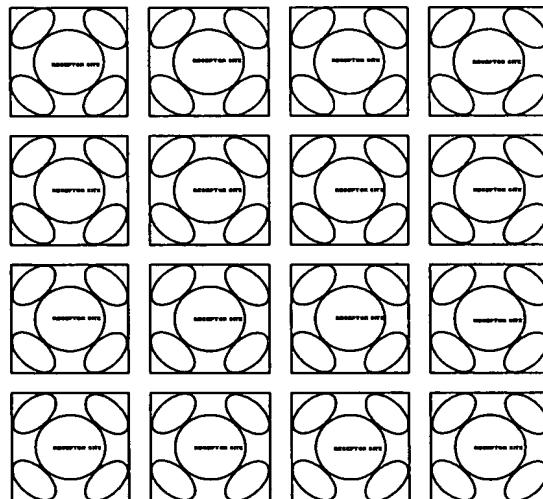
TOP VIEW



RECEPTOR  
**\*UNIT CELL\***



MULTIPLE \*UNIT CELL\* REPRESENTATION



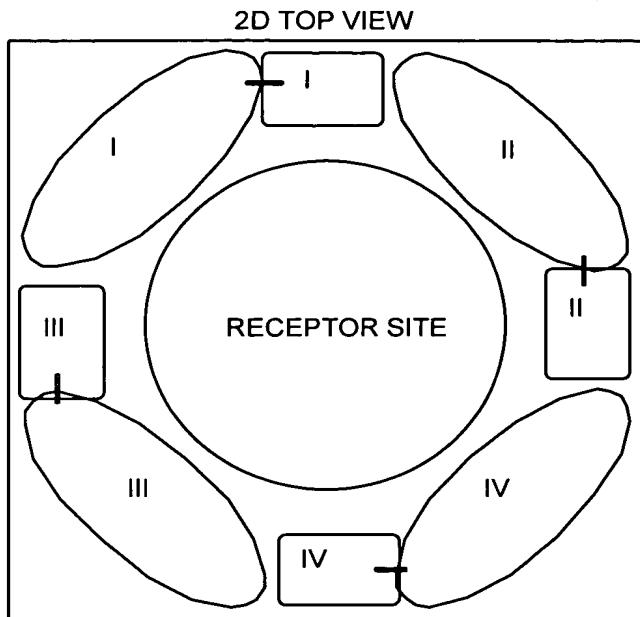
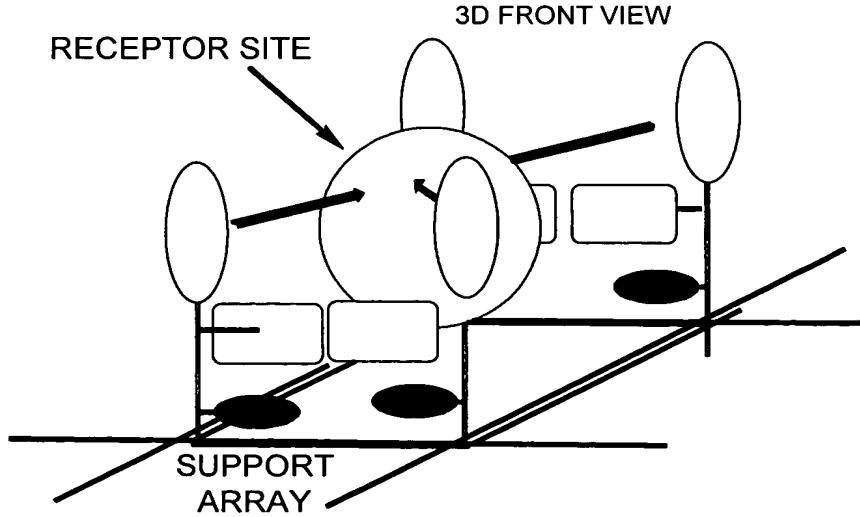
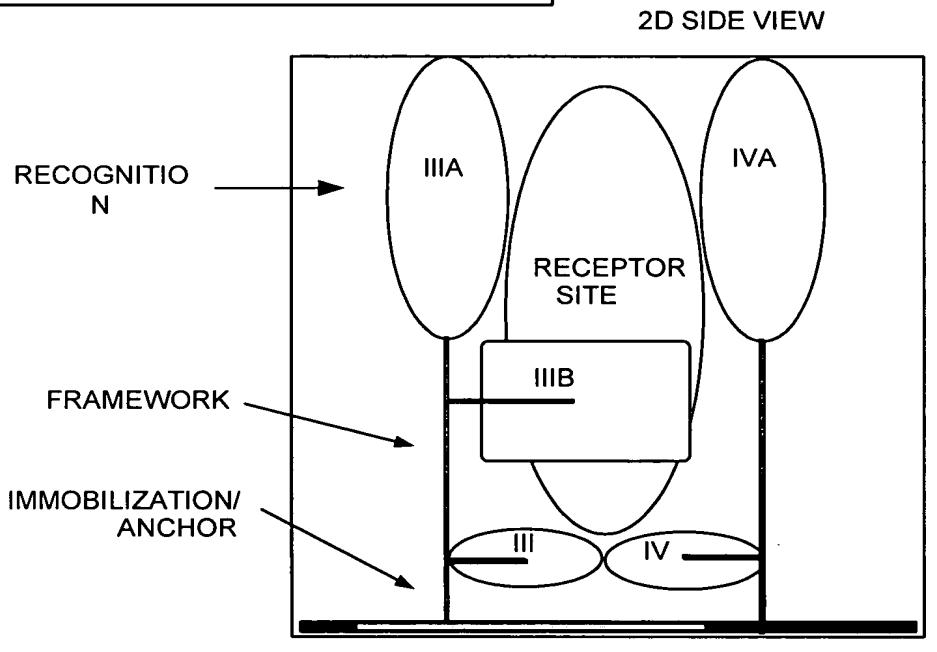
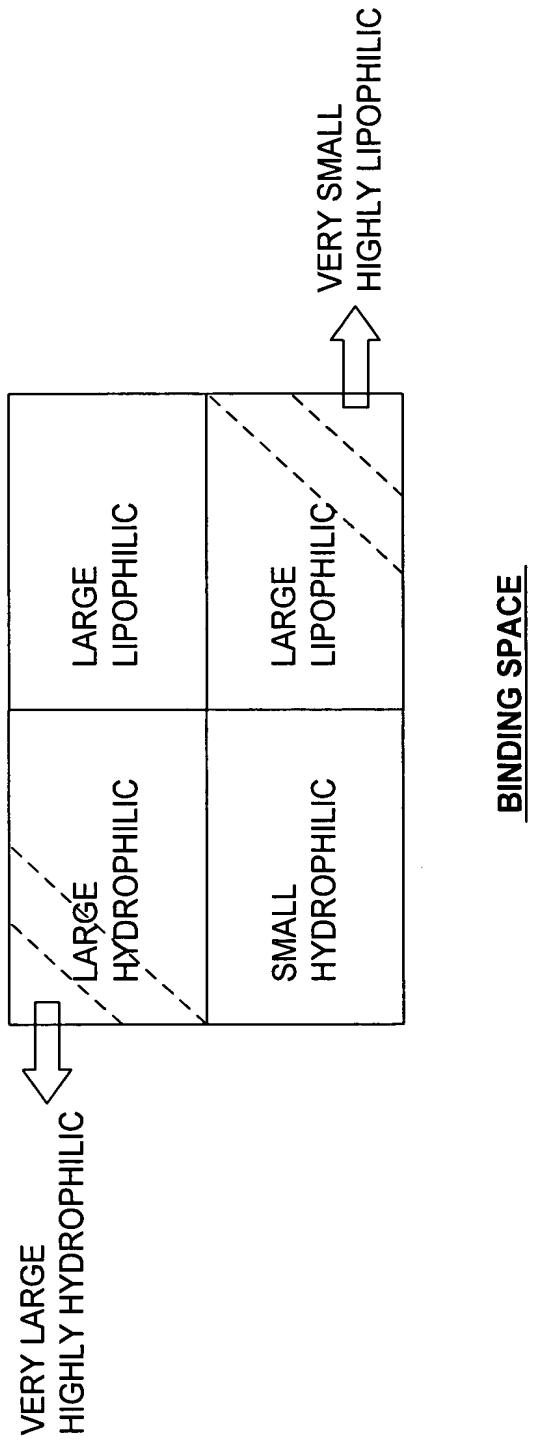


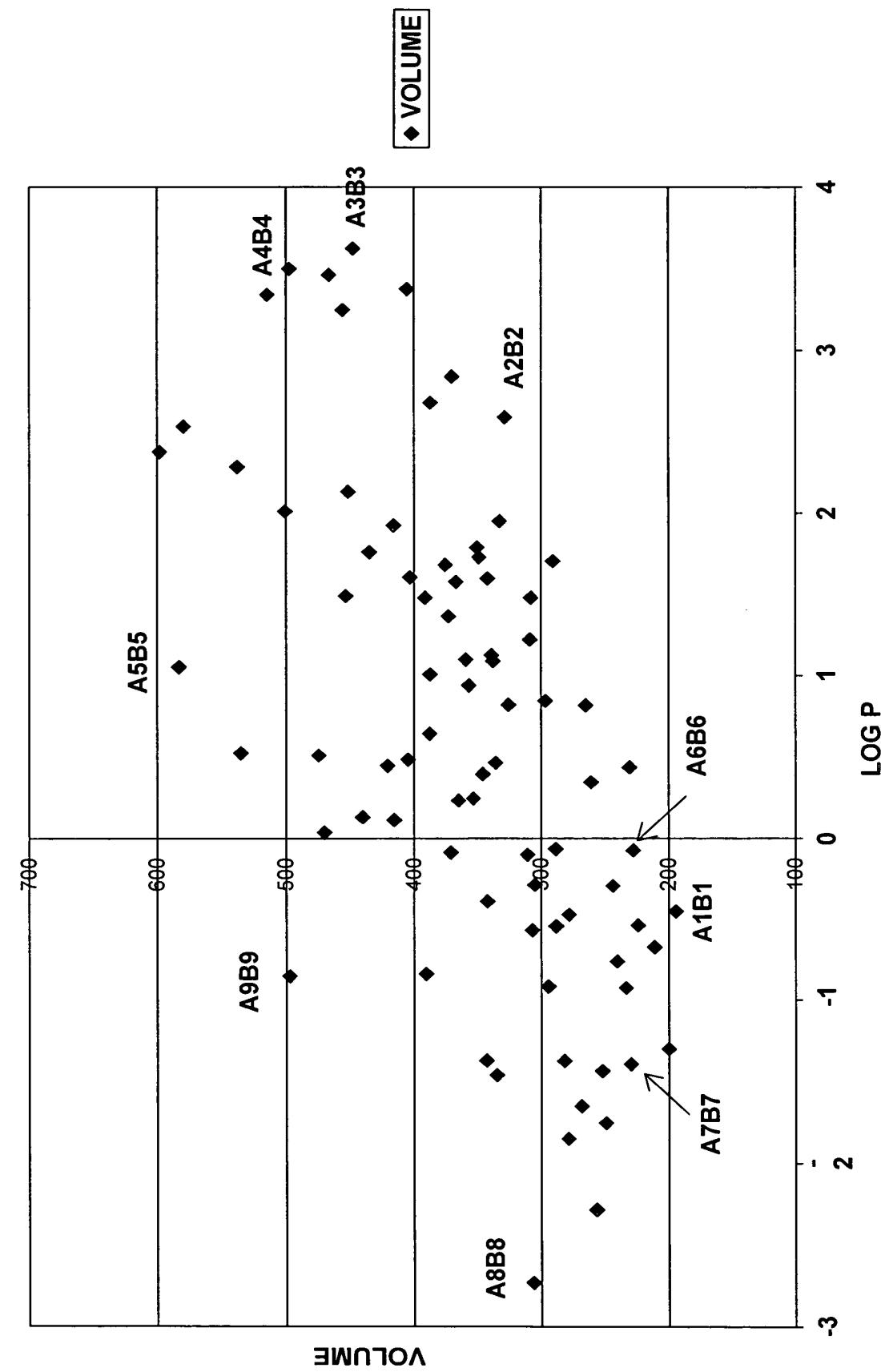
FIG.2



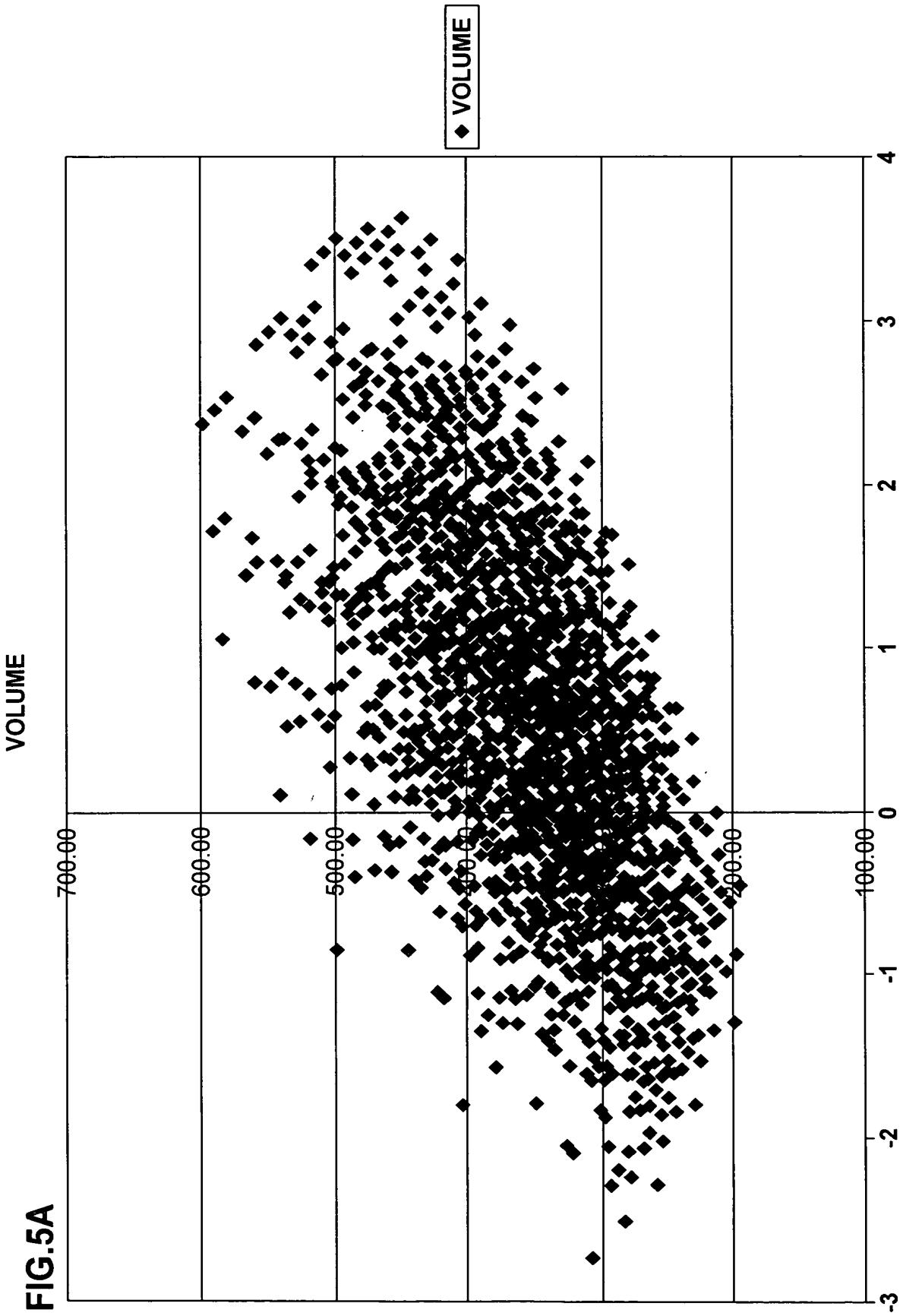
**FIG.3**



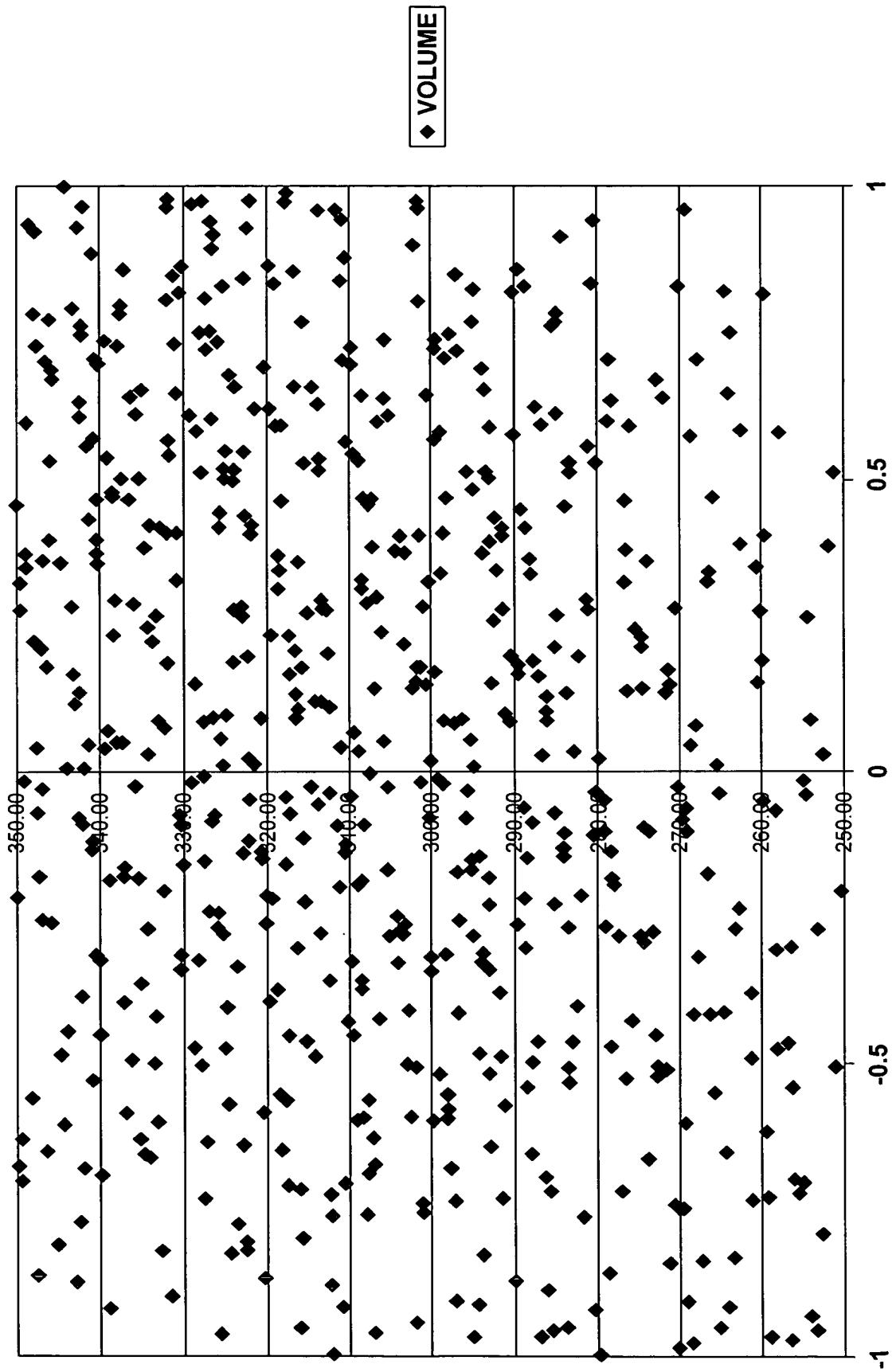
**FIG.4**



**FIG.5A**



**FIG.5B**



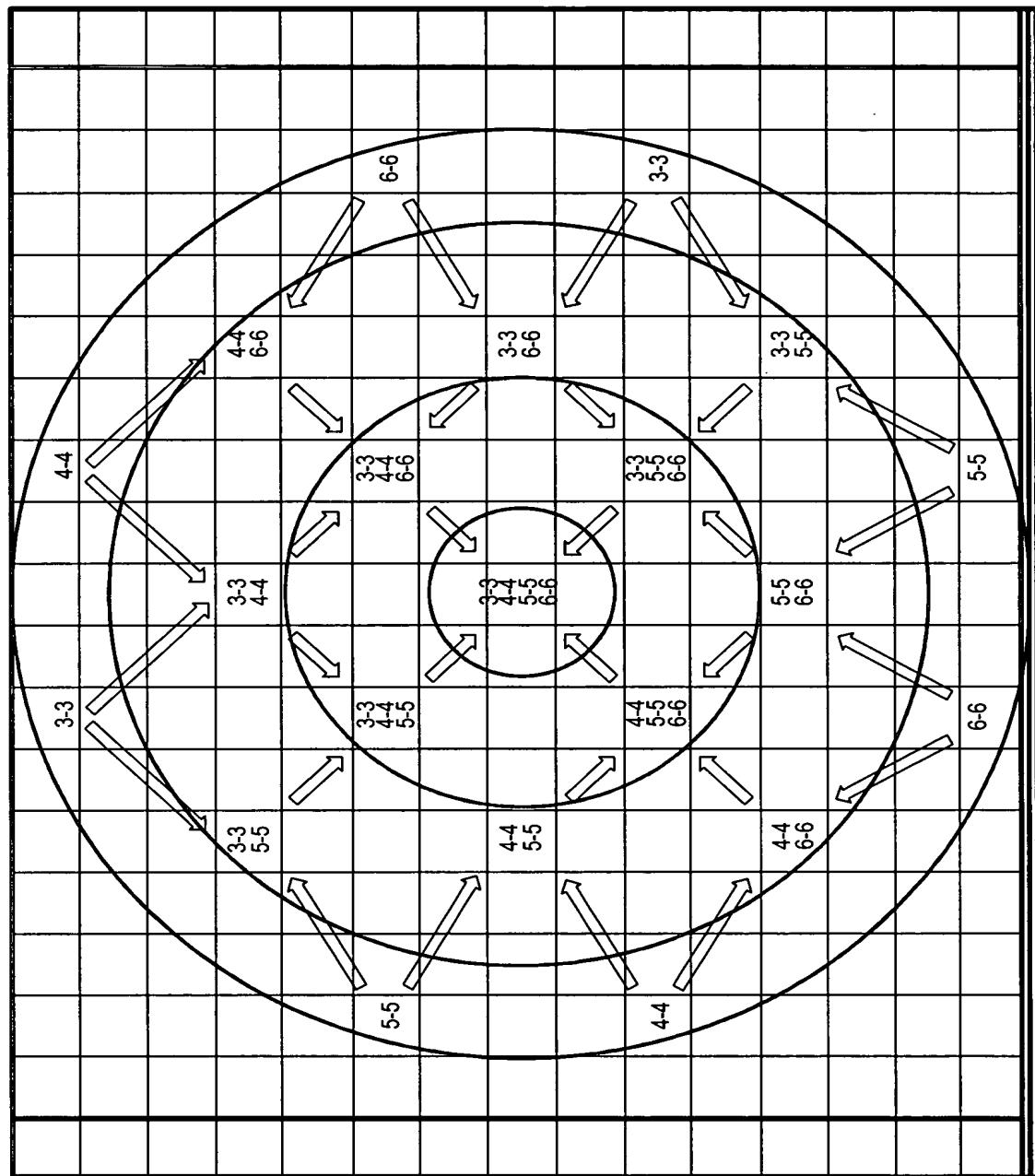
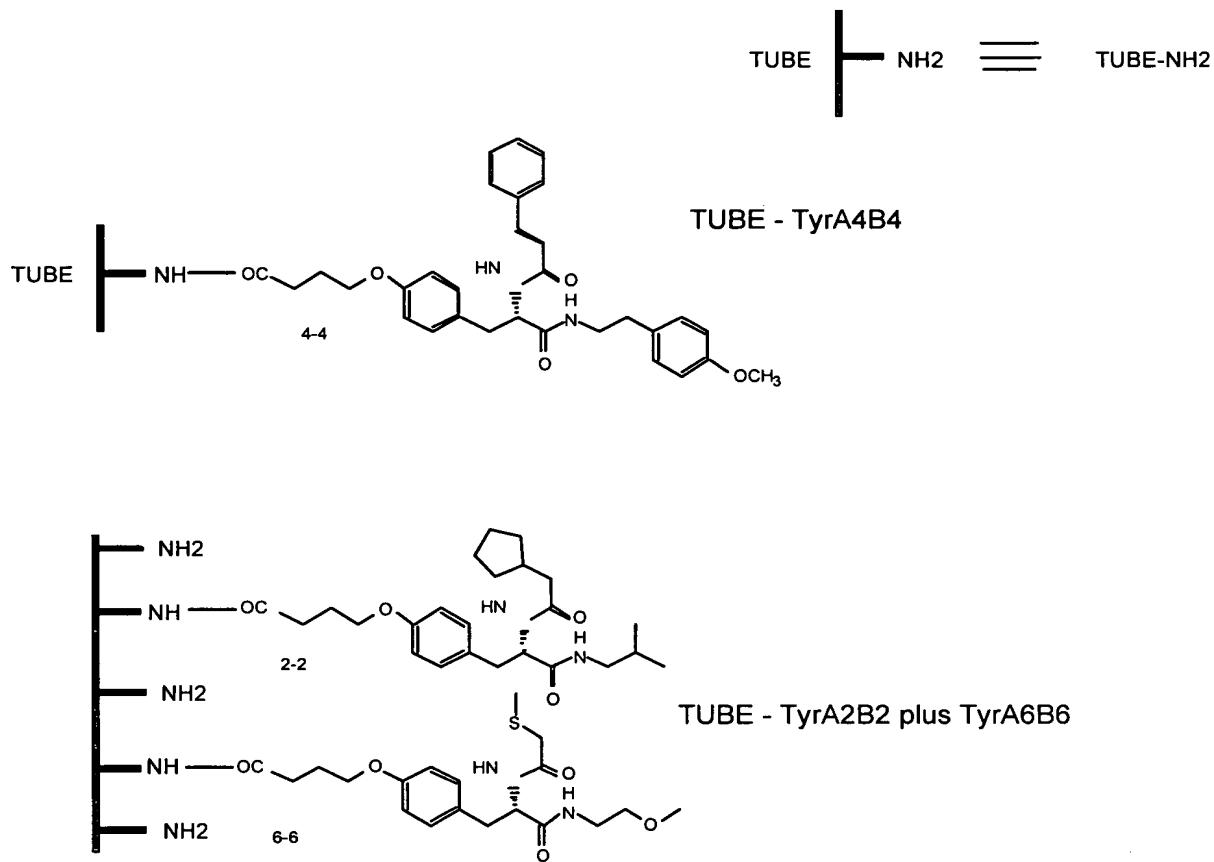
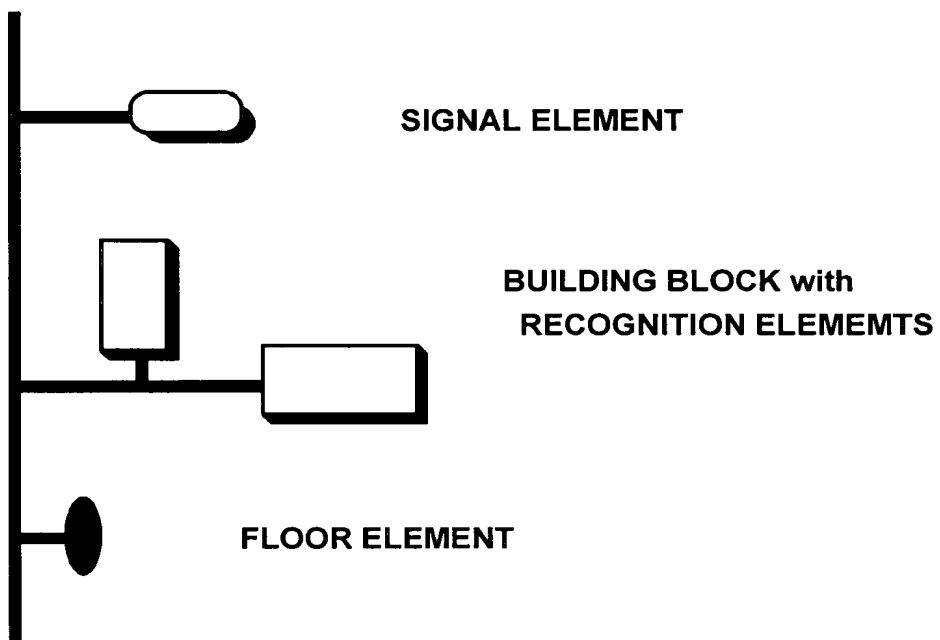


FIG.6

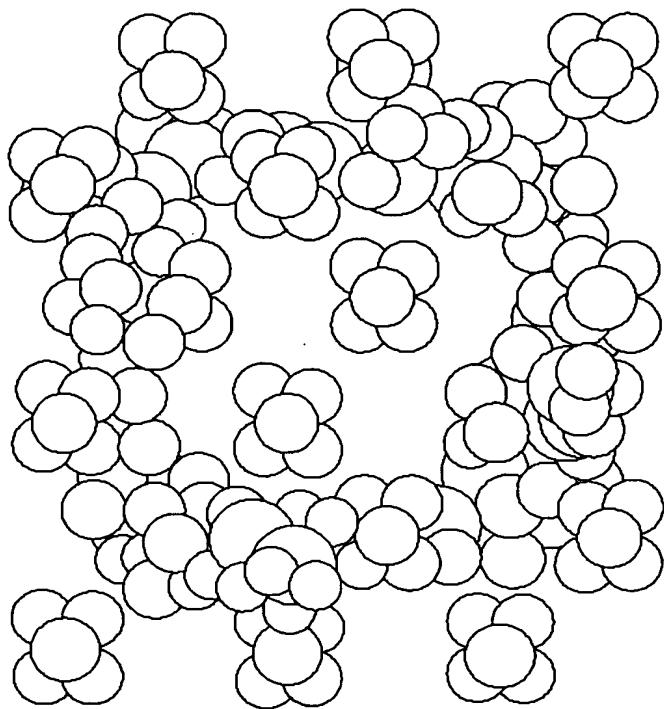
FIG.7A



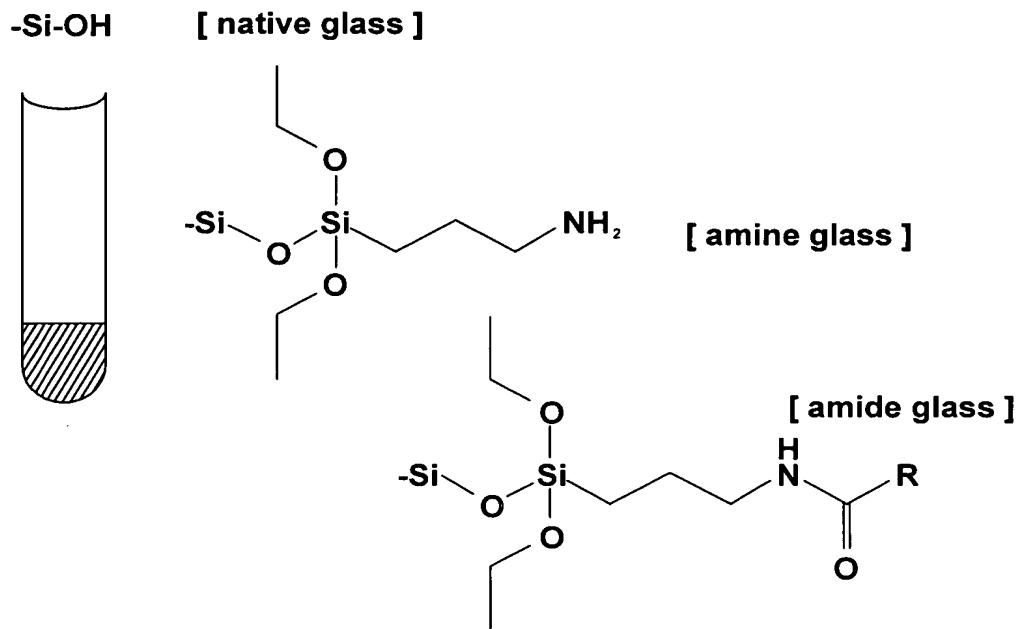
## FIG.7B



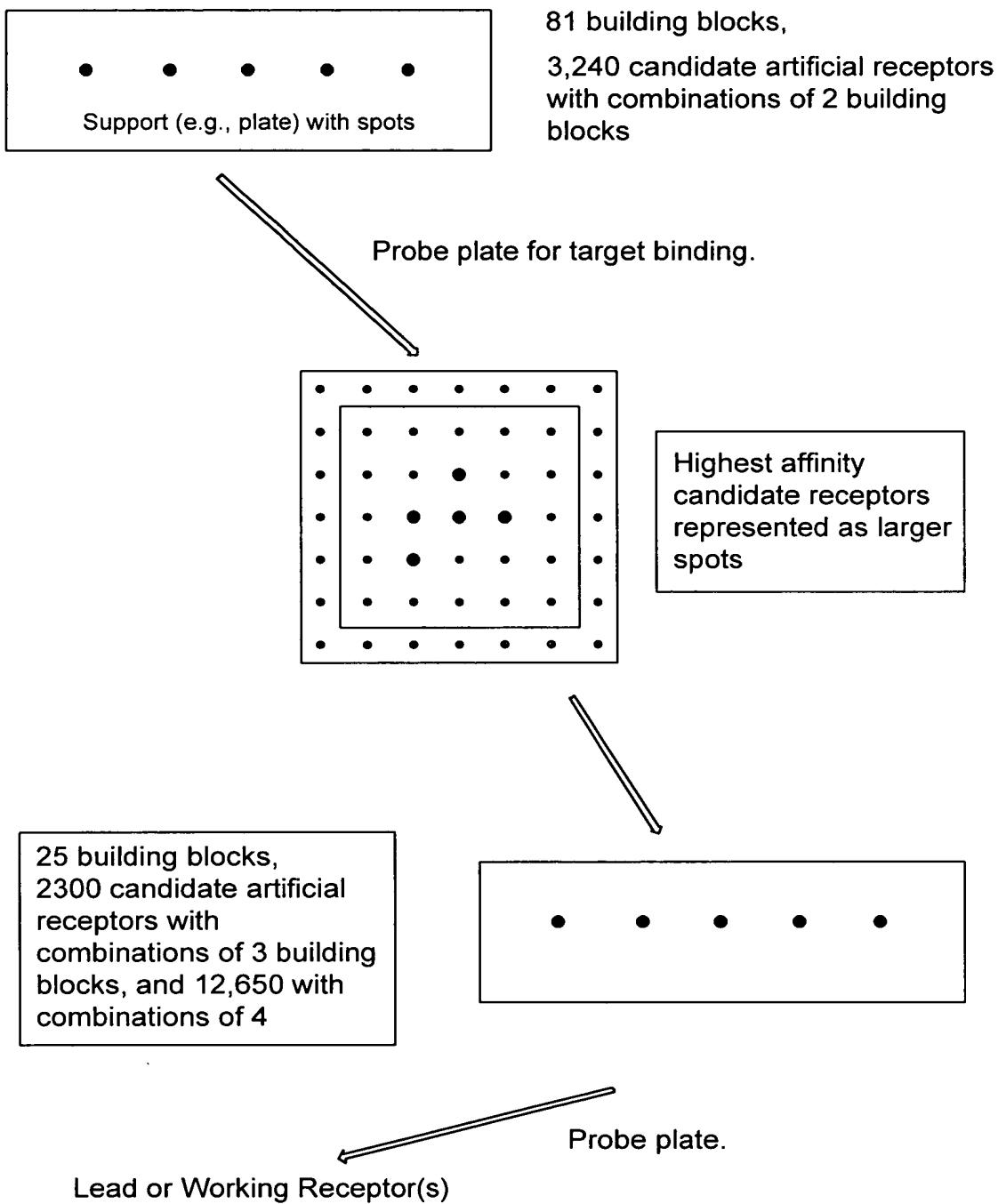
**FIG.8**



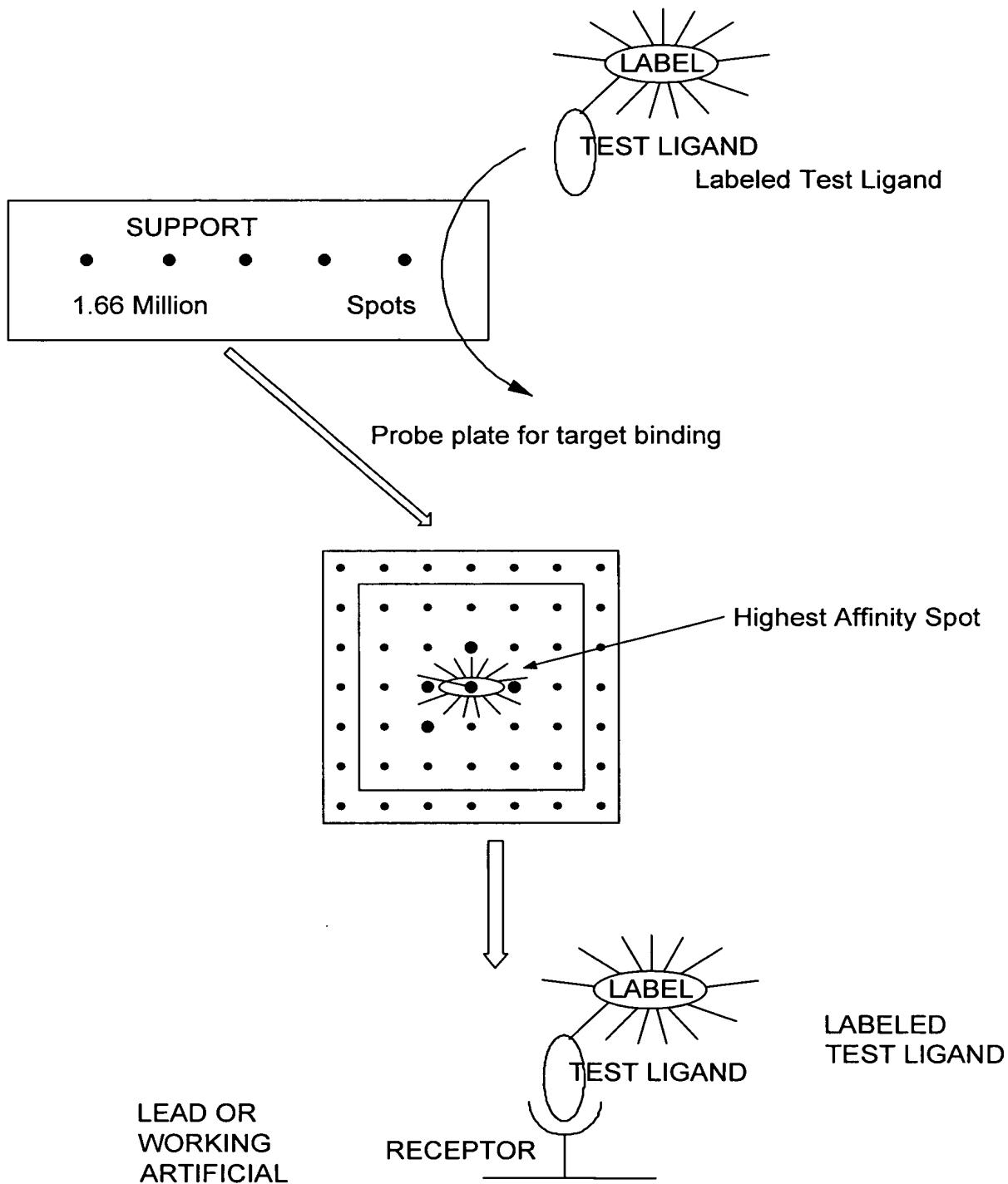
**FIG.9**



**FIG.10**



**FIG.11**



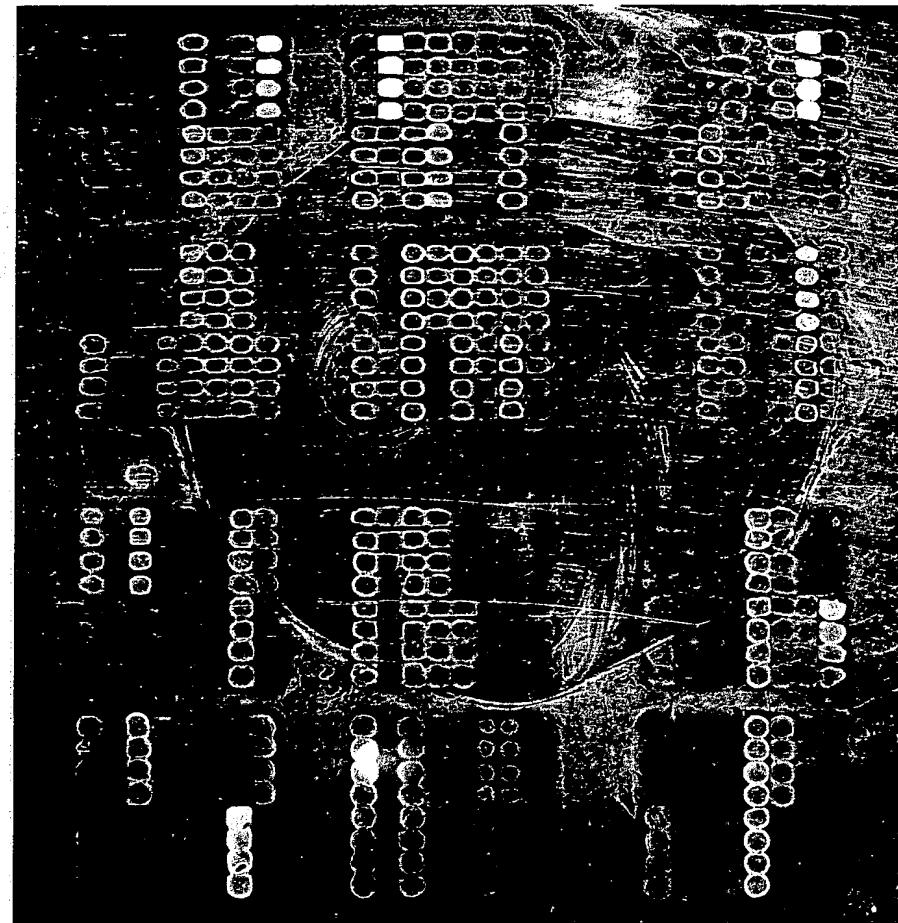
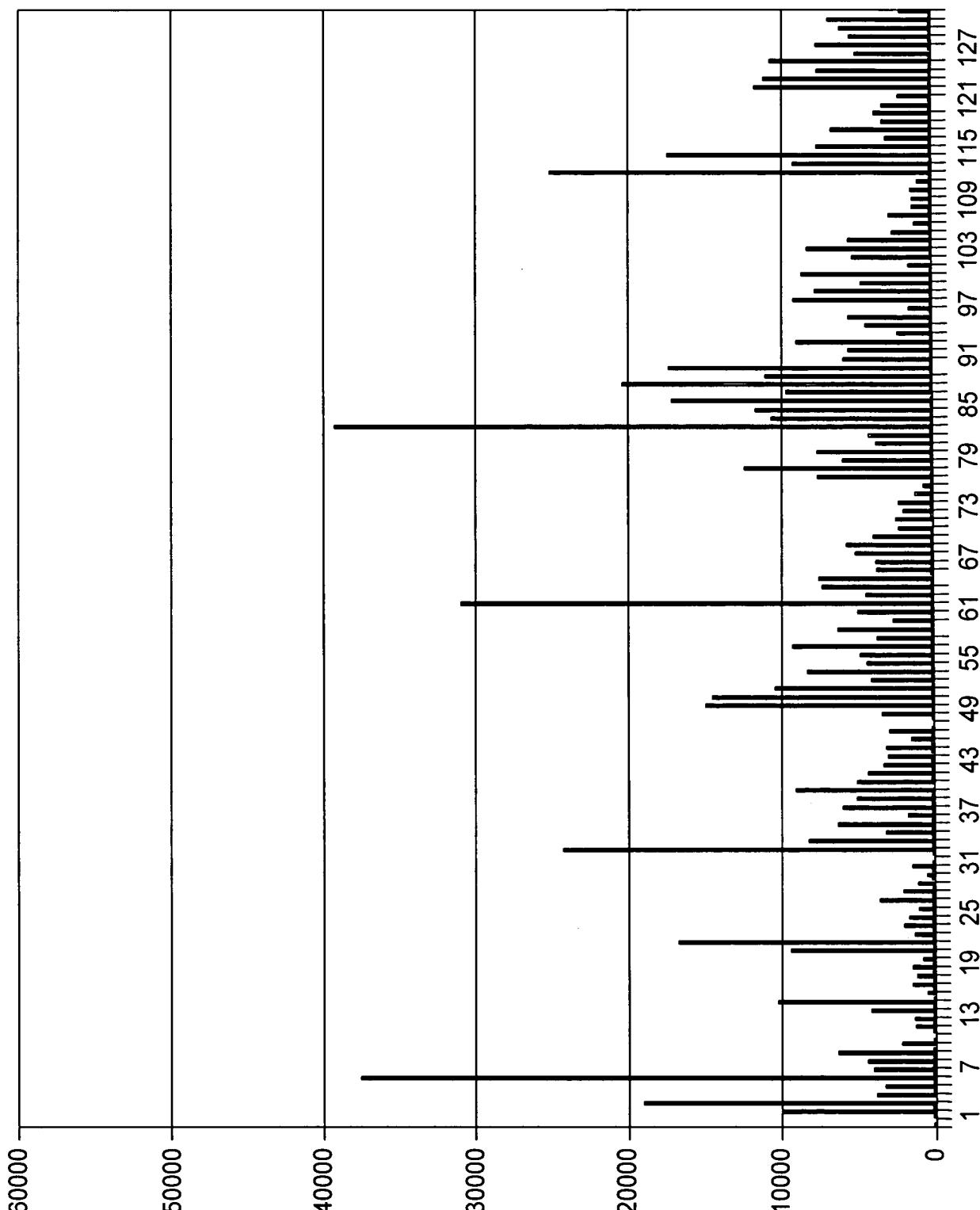


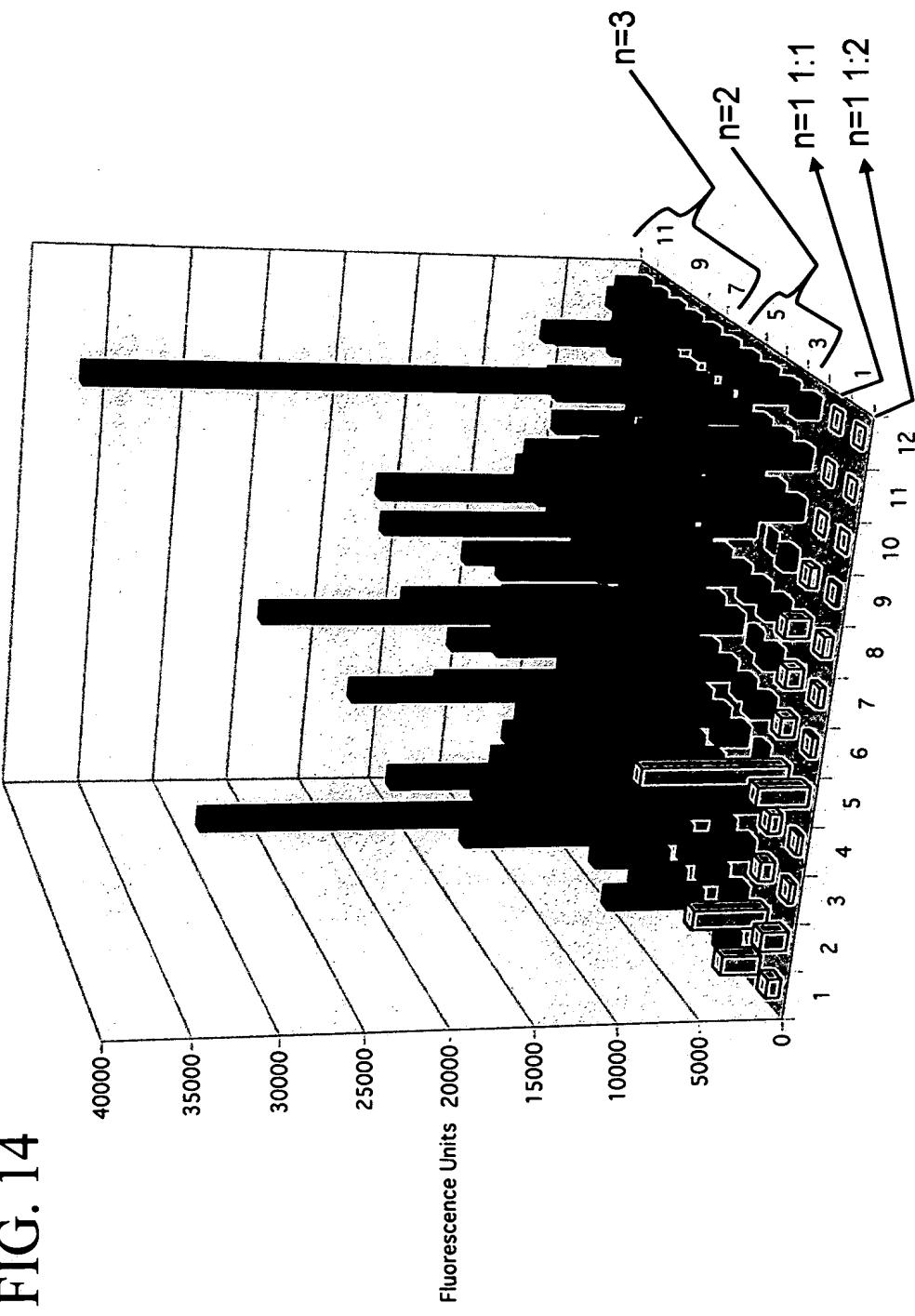
FIG. 12

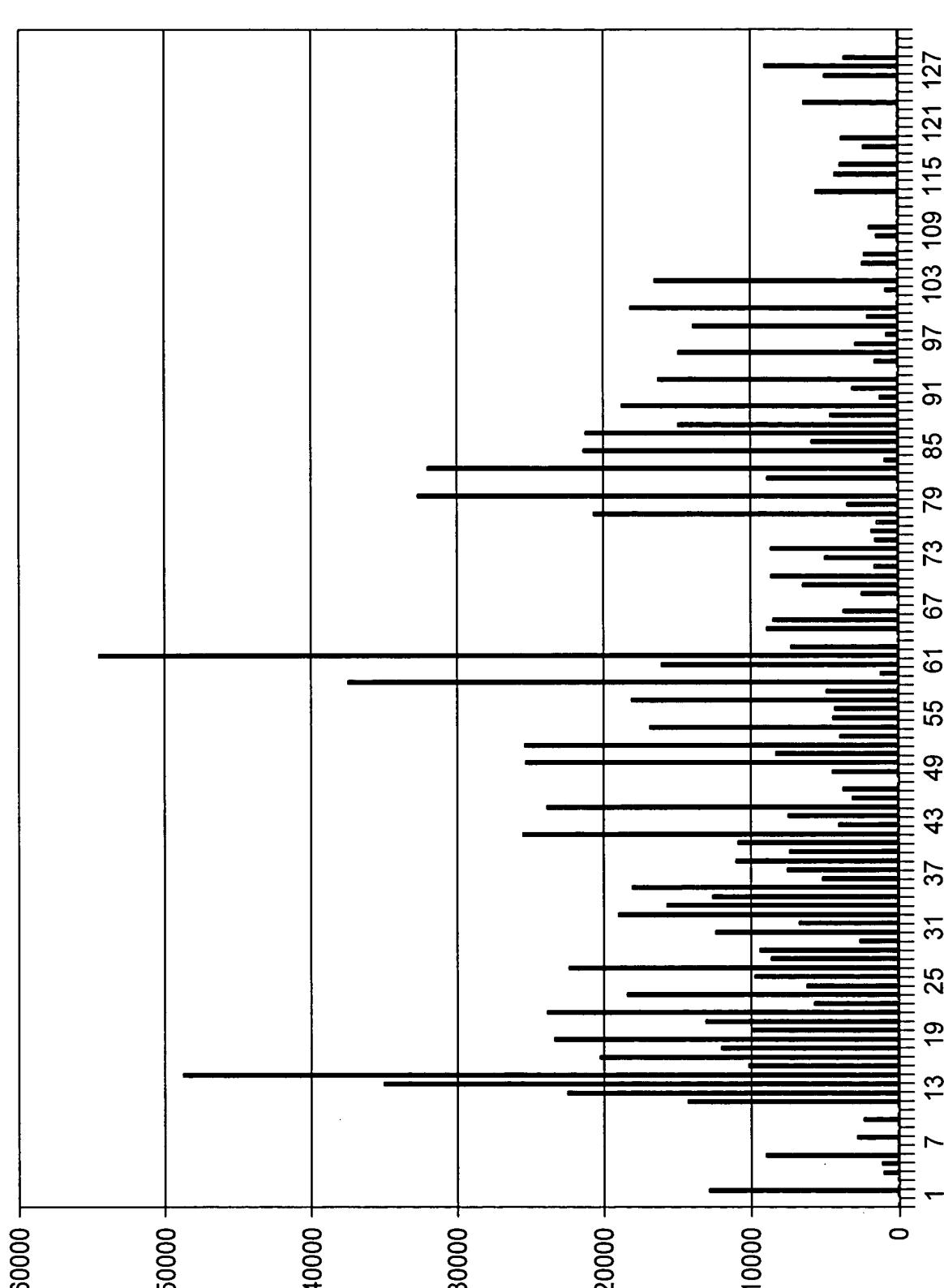
Origin = 28, 140 pixels  
(0.28, 1.4 mm)  
Size = 2032 x 1888 pixels  
(20.32 x 18.88 mm)  
Scaling = 10  $\mu\text{m}/\text{pixel}$   
Scanner = GenePix 4100A 01 [92896]  
No averaging.  
PMT Gain = 940  
Laser Power = 100%  
Normalization Factor = 1  
Focus Position = 0



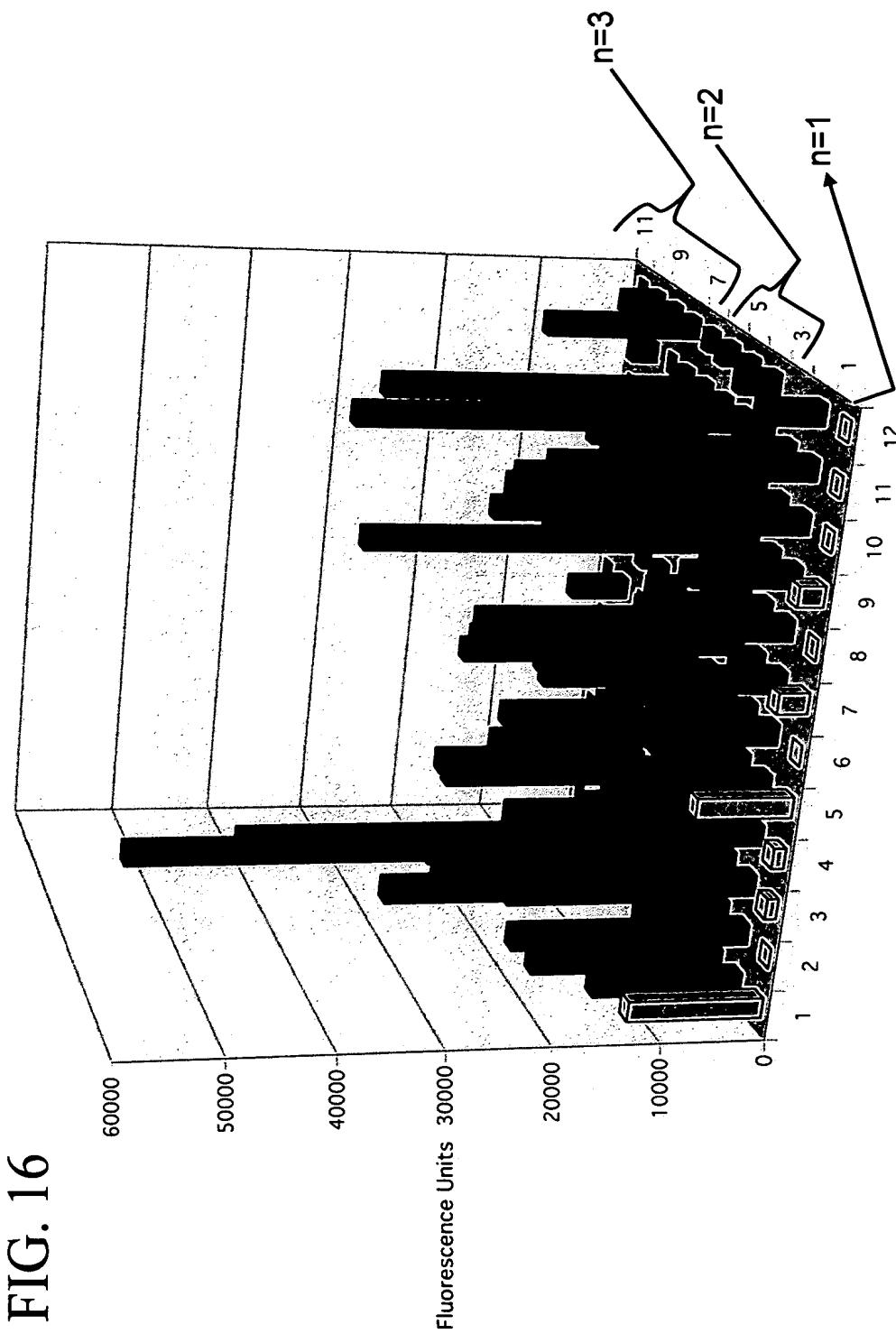
**FIG.13**

FIG. 14 N9 : PHYCO : n=1, n=2, n=3





**FIG.15**



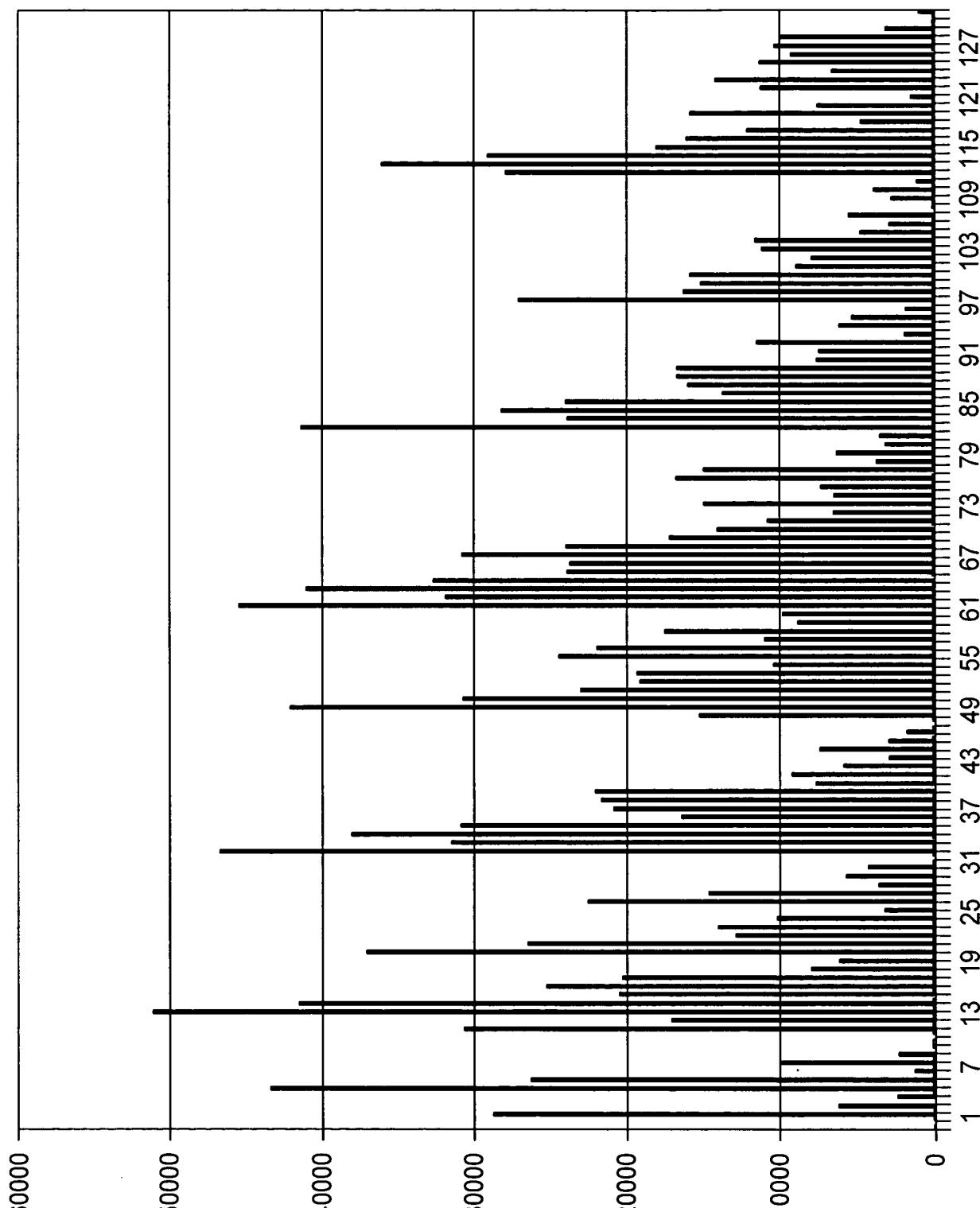
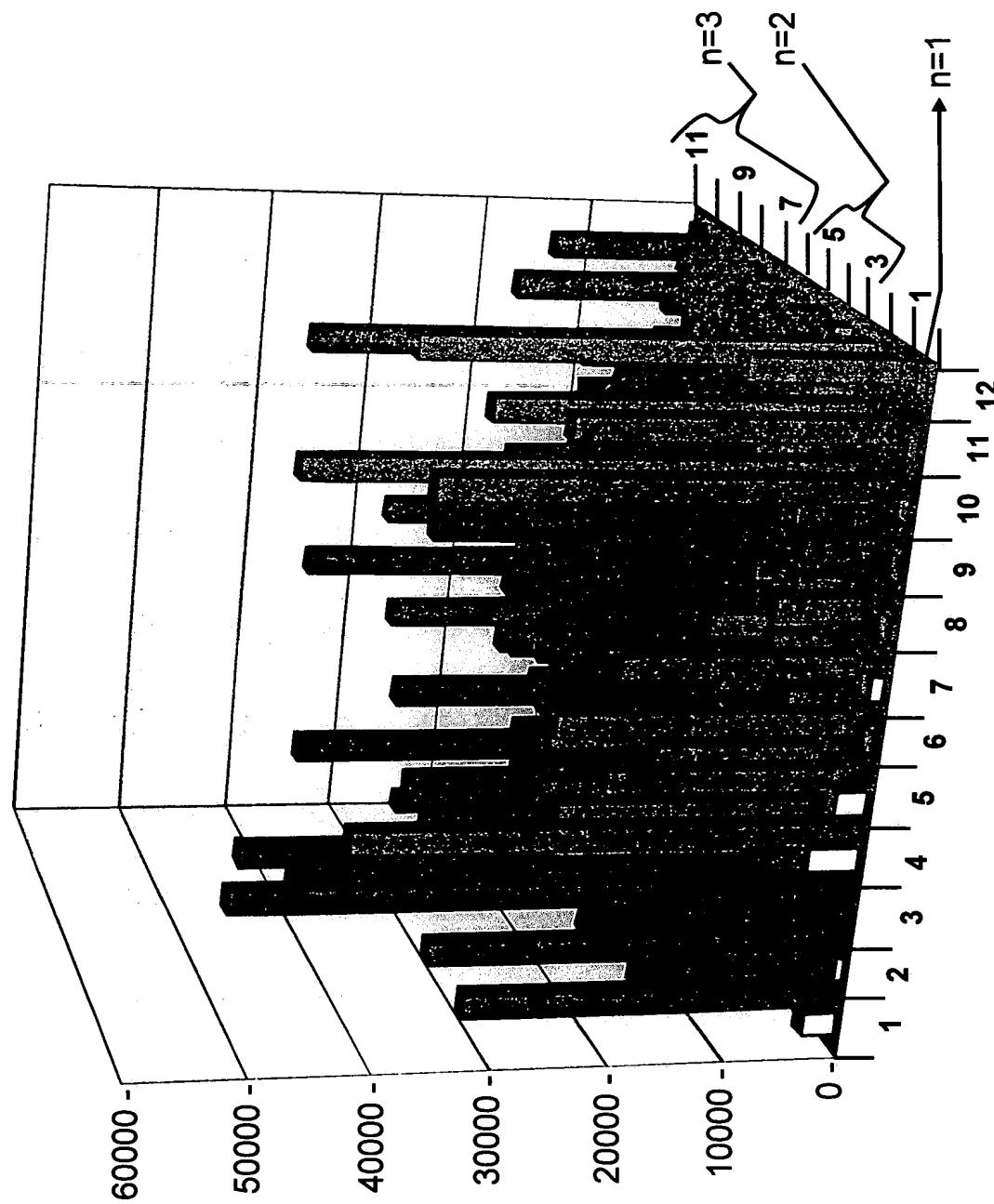
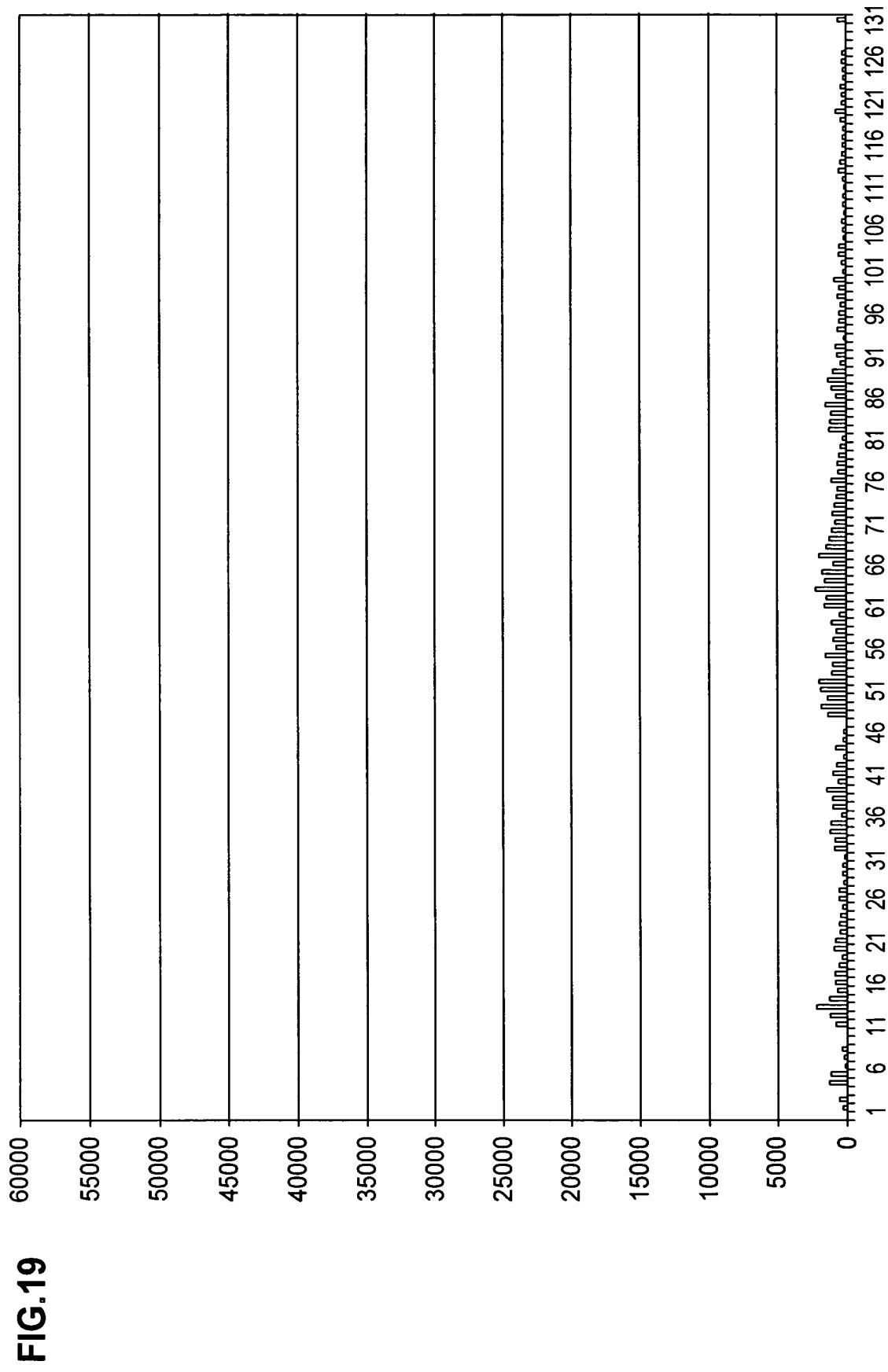


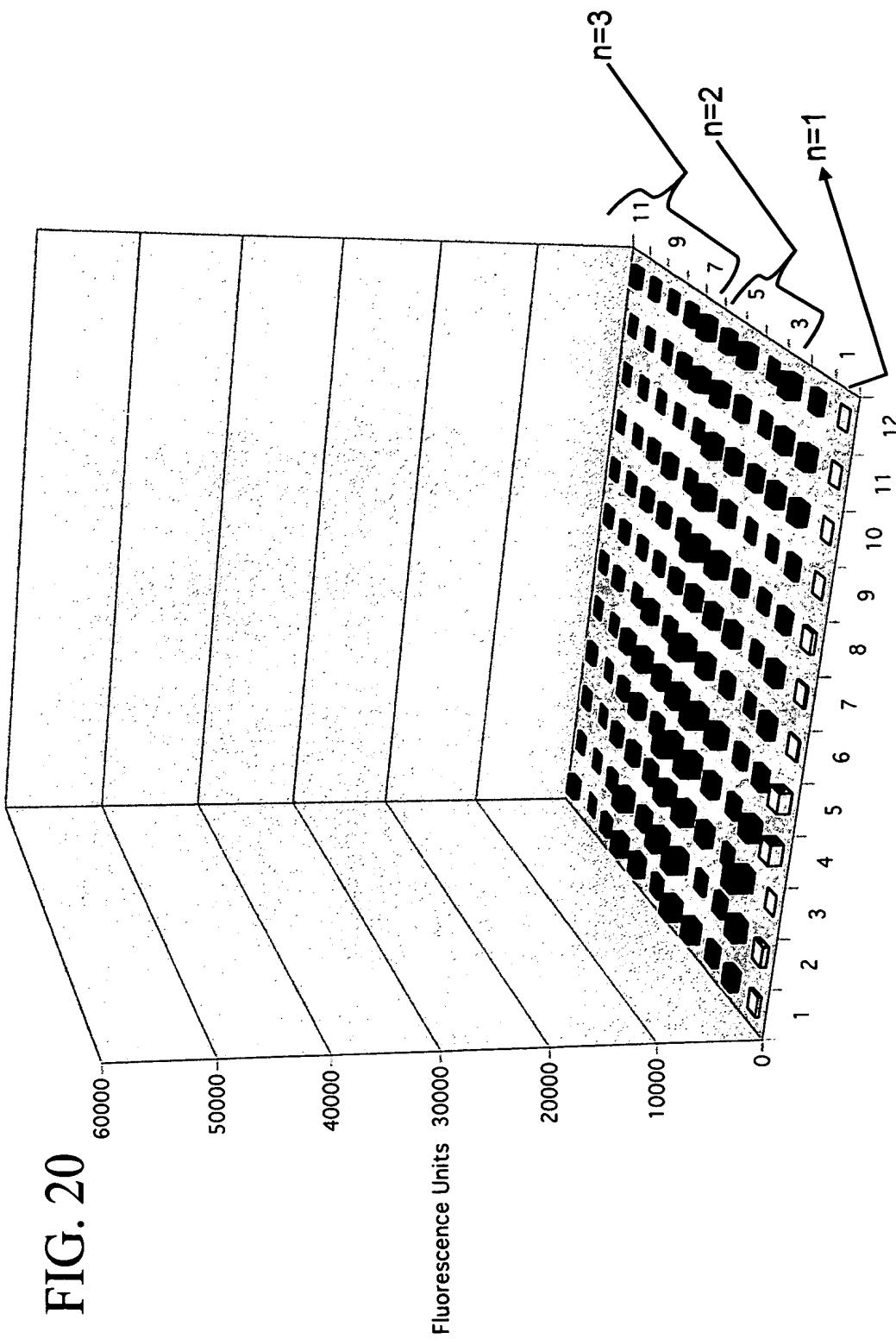
FIG.17

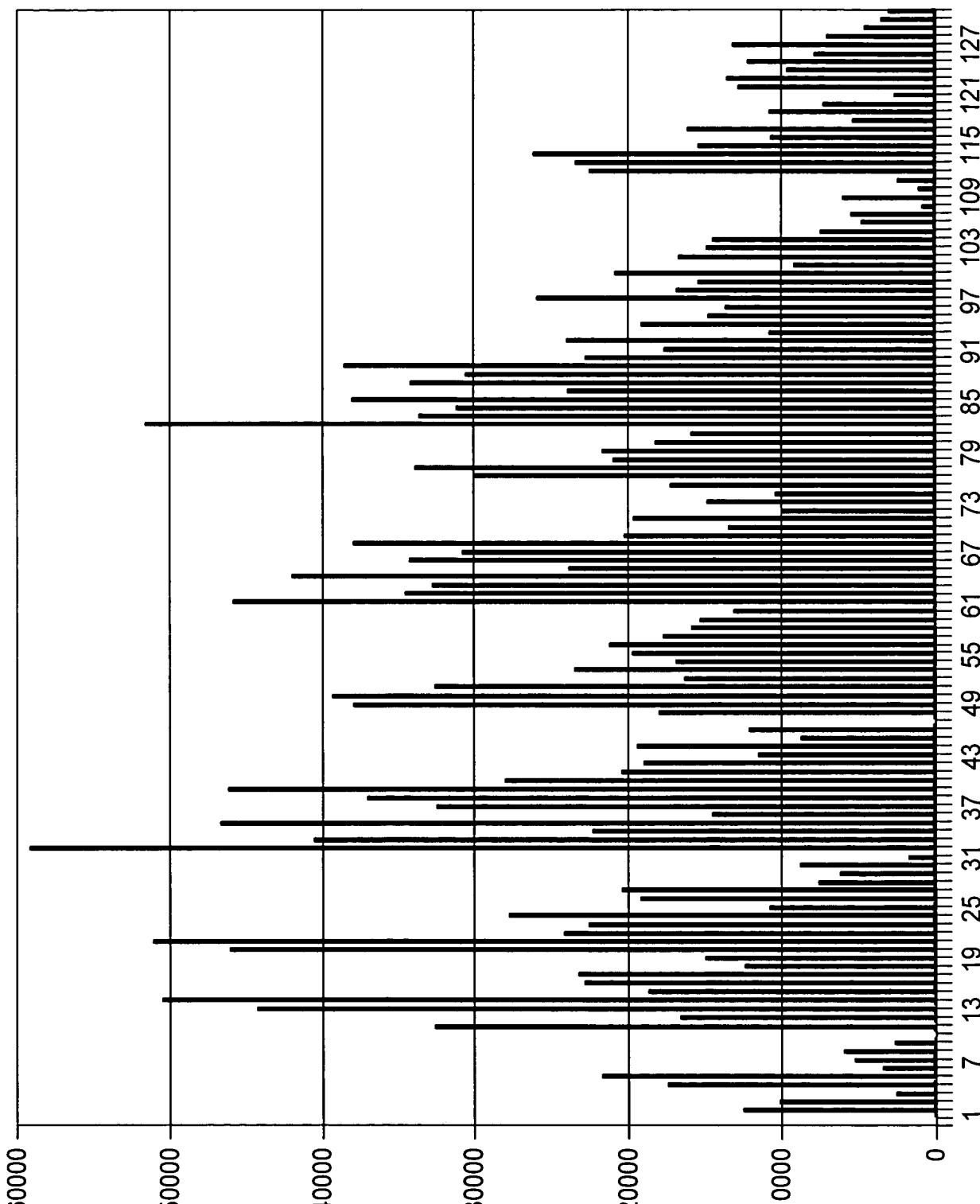
FIG. 18

Fluorescence Units

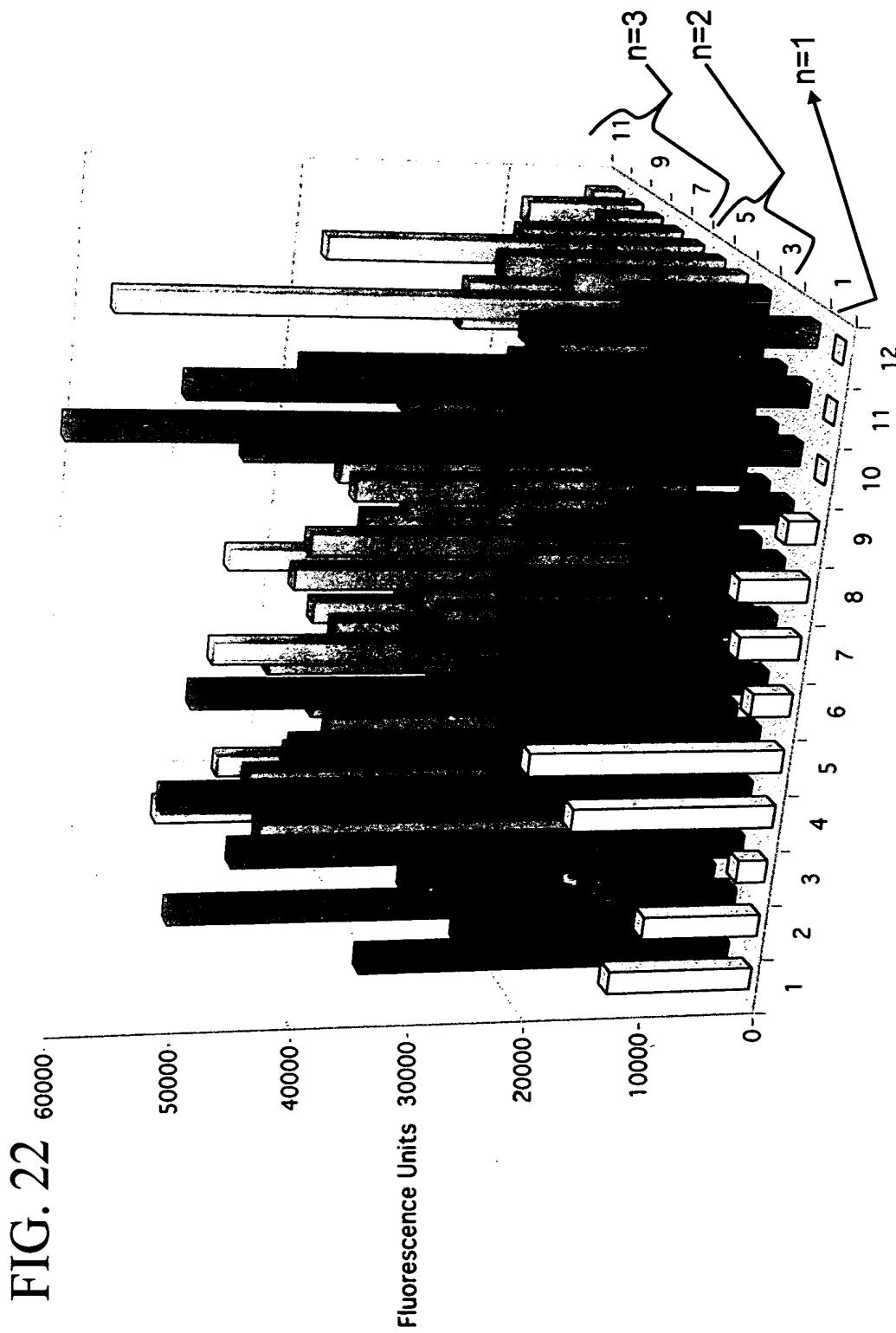








**FIG.21**



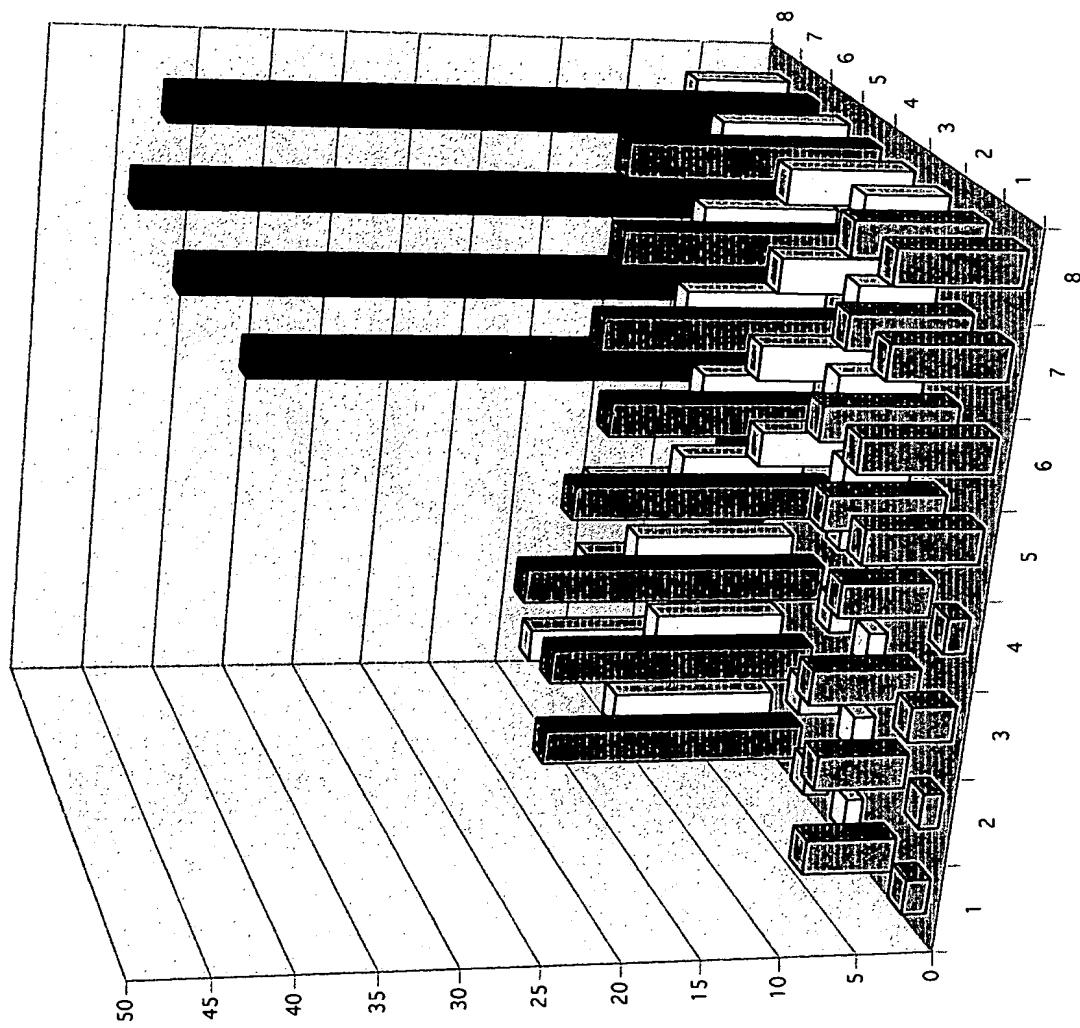
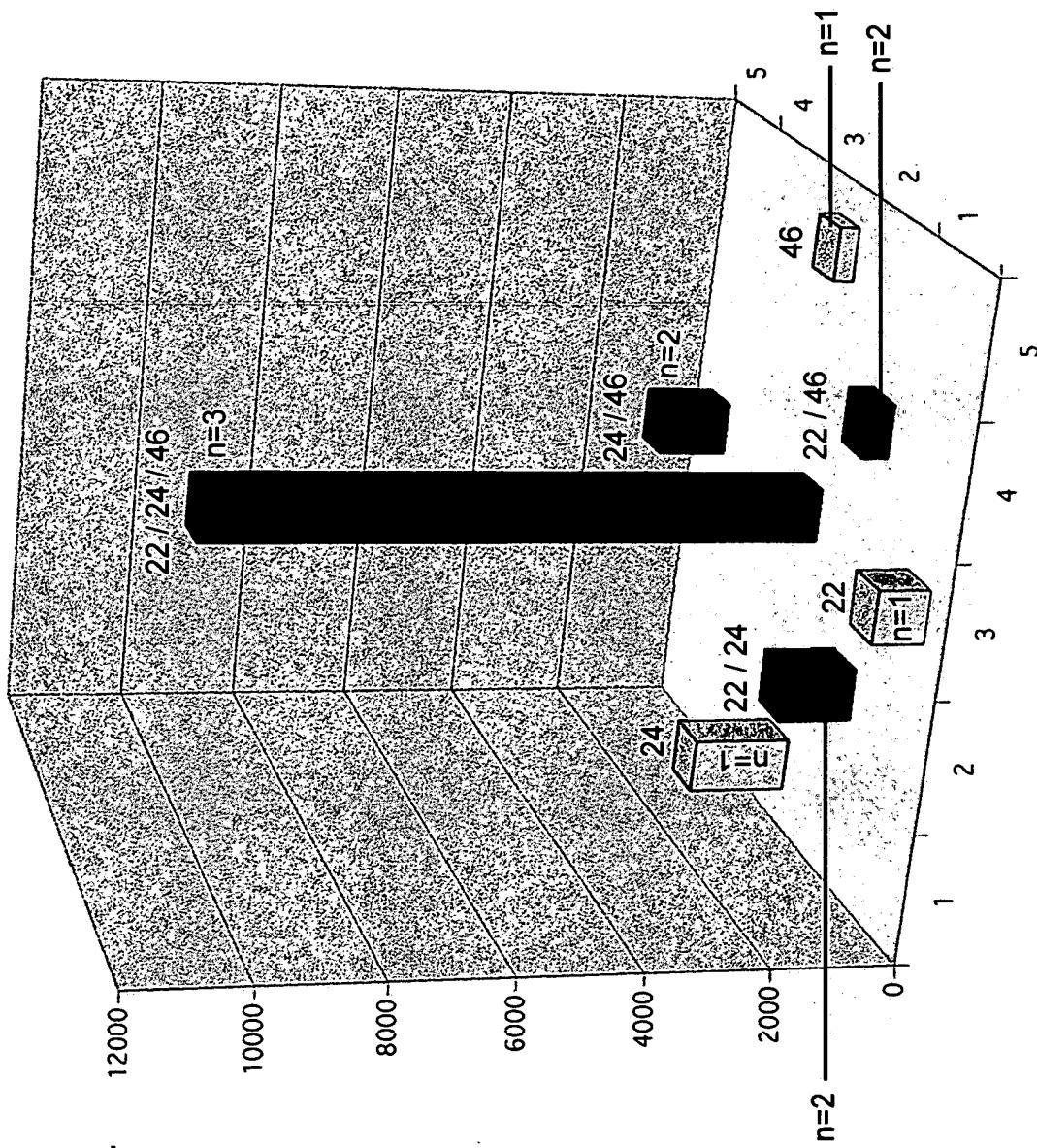
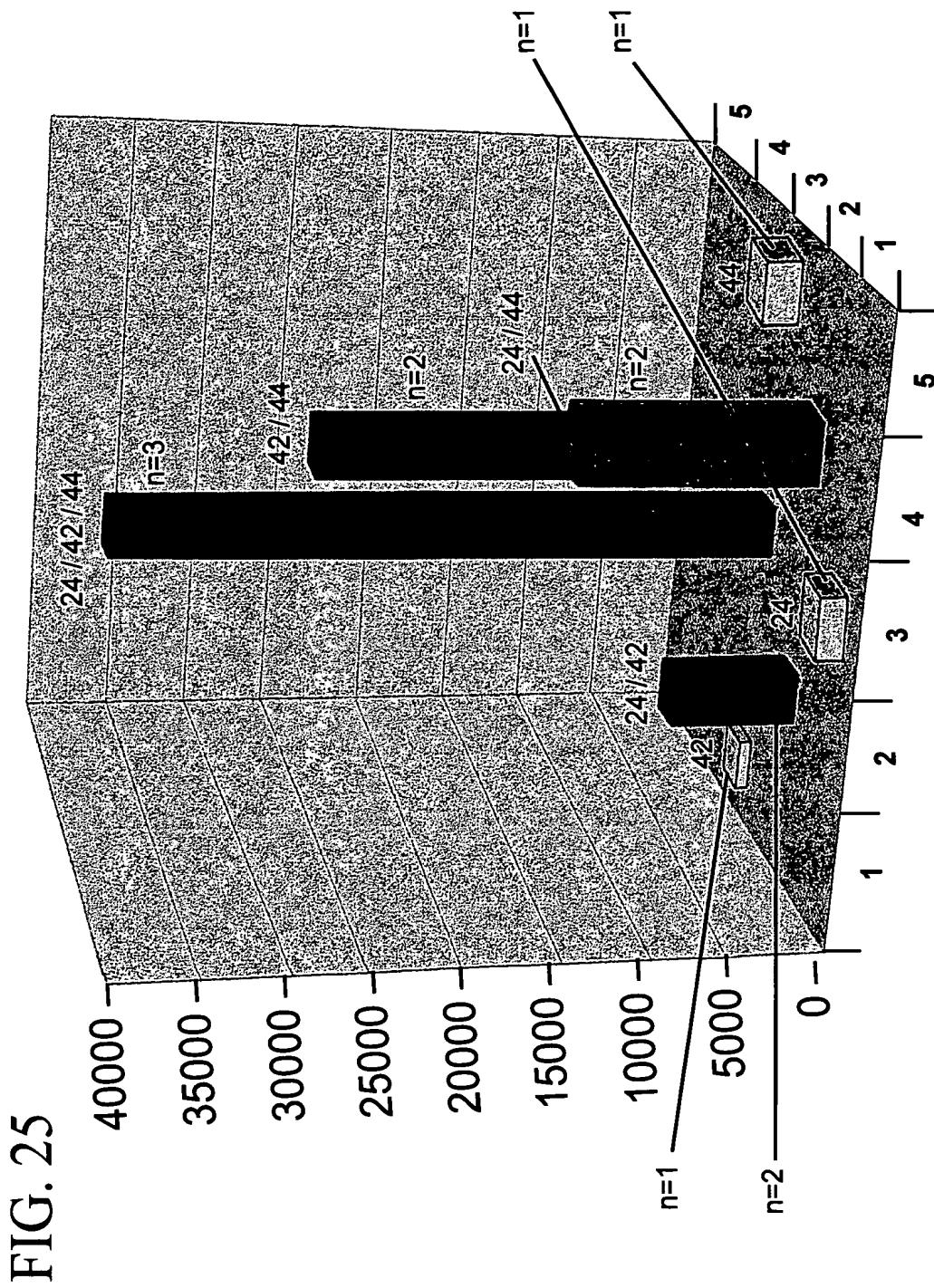
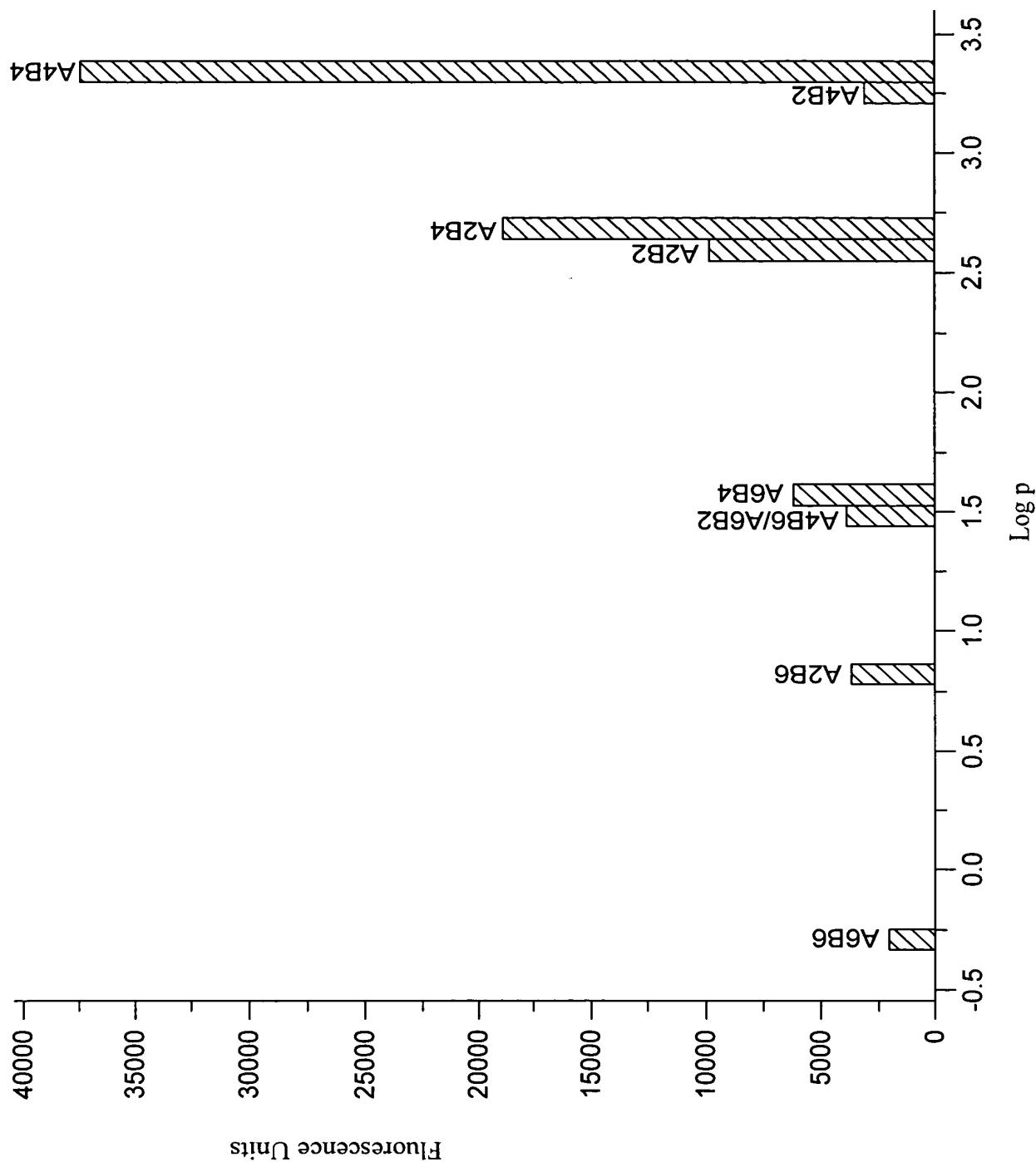


FIG. 23

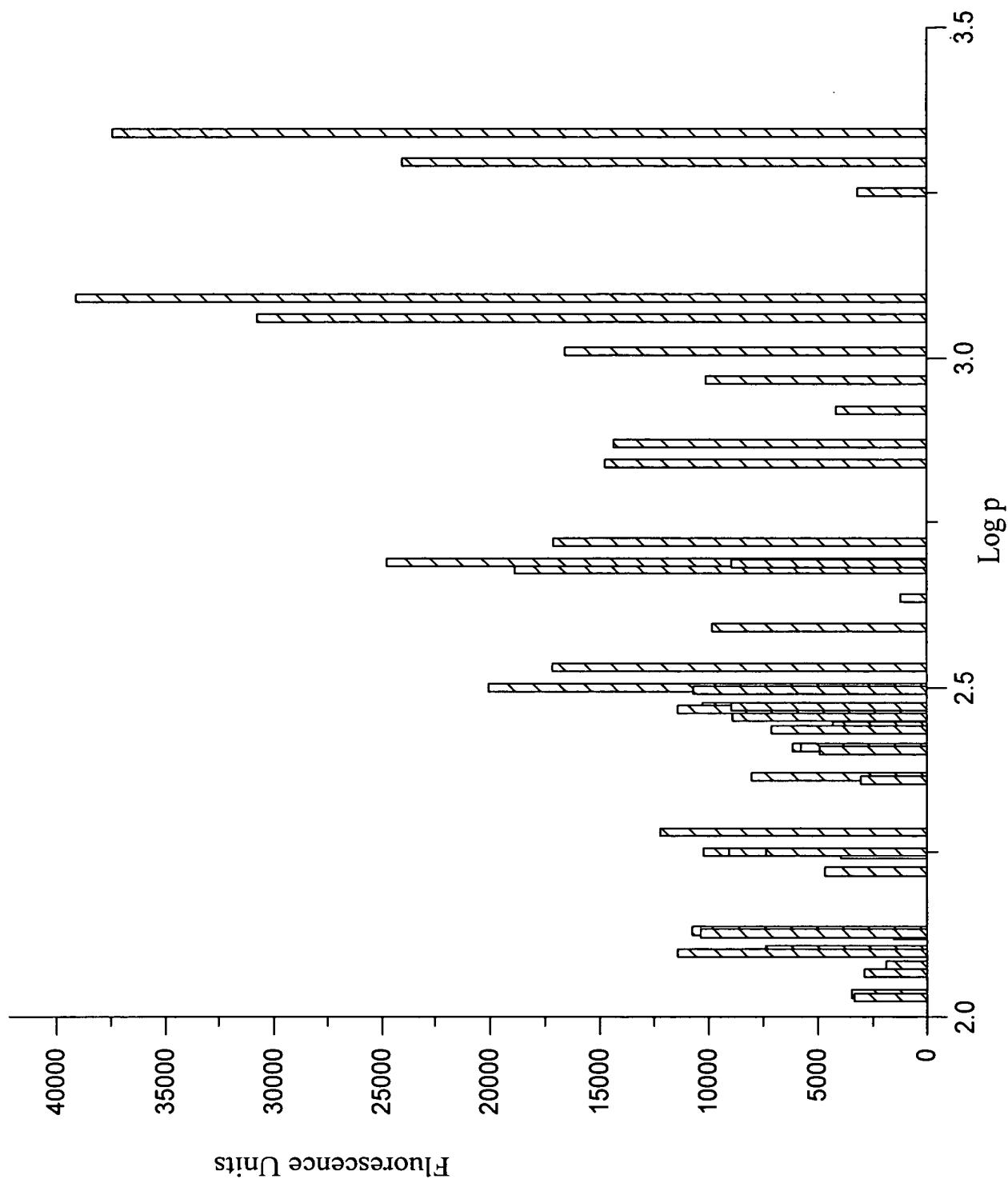
FIG. 24







**FIG.26**



**FIG.27**

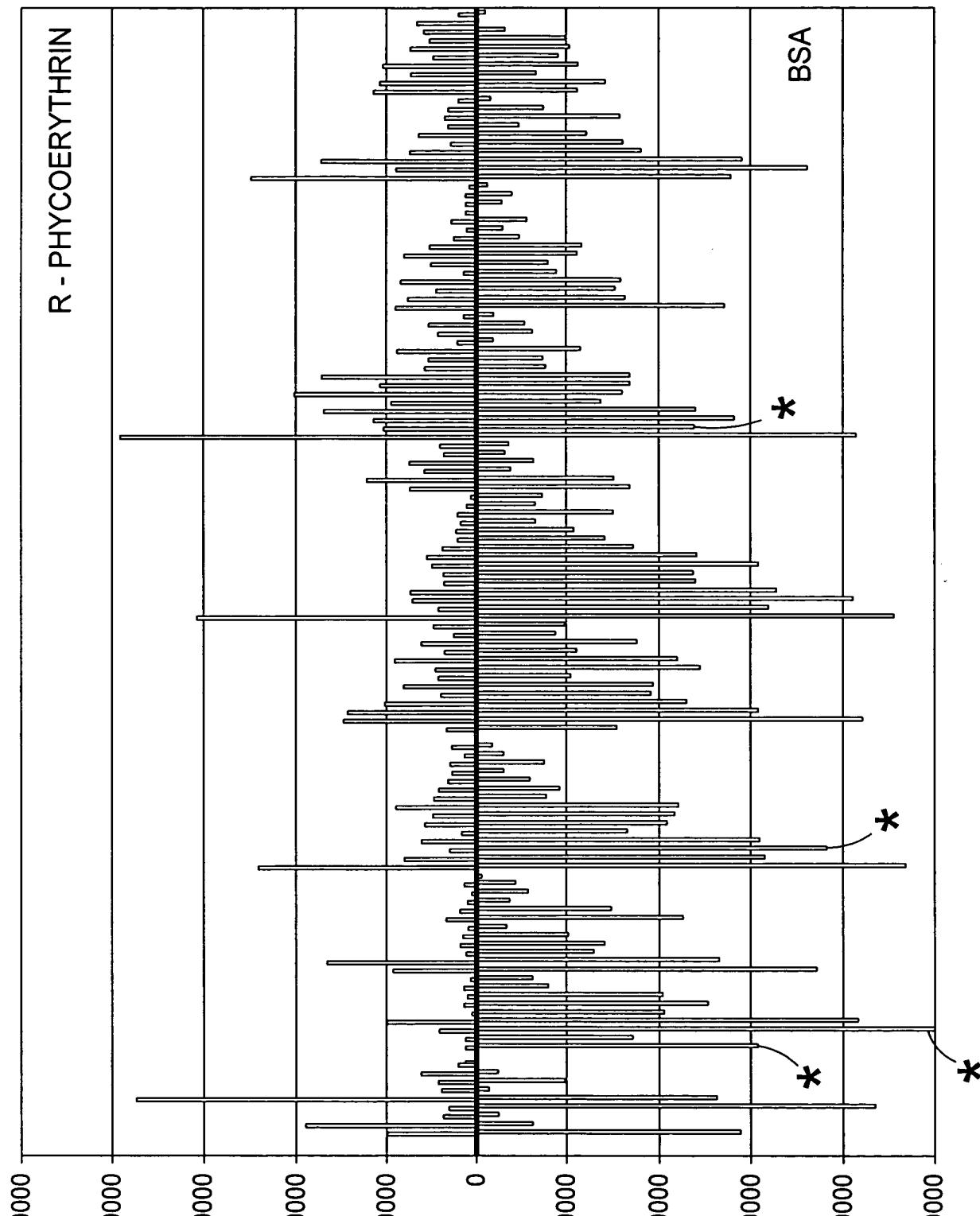


FIG.28

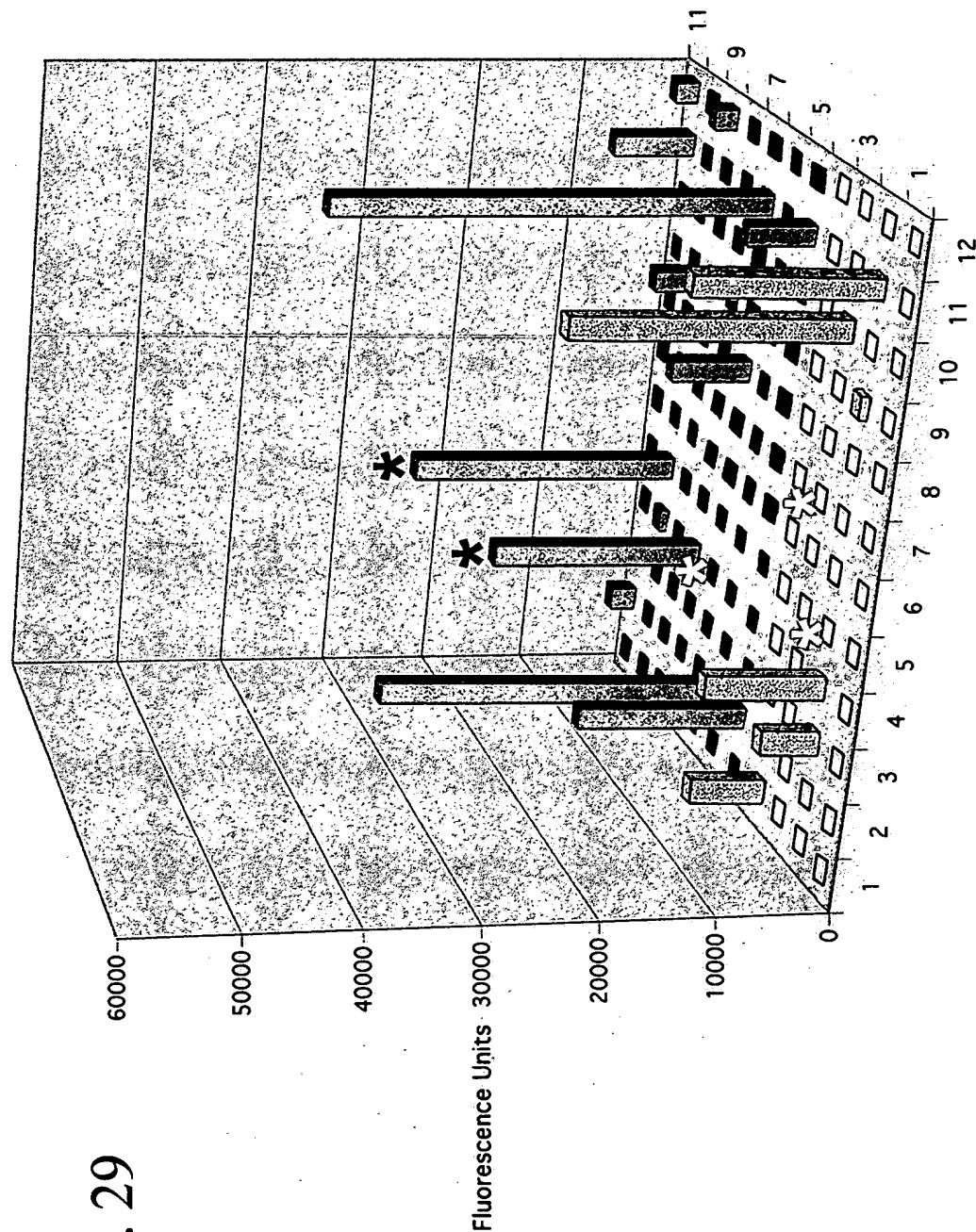
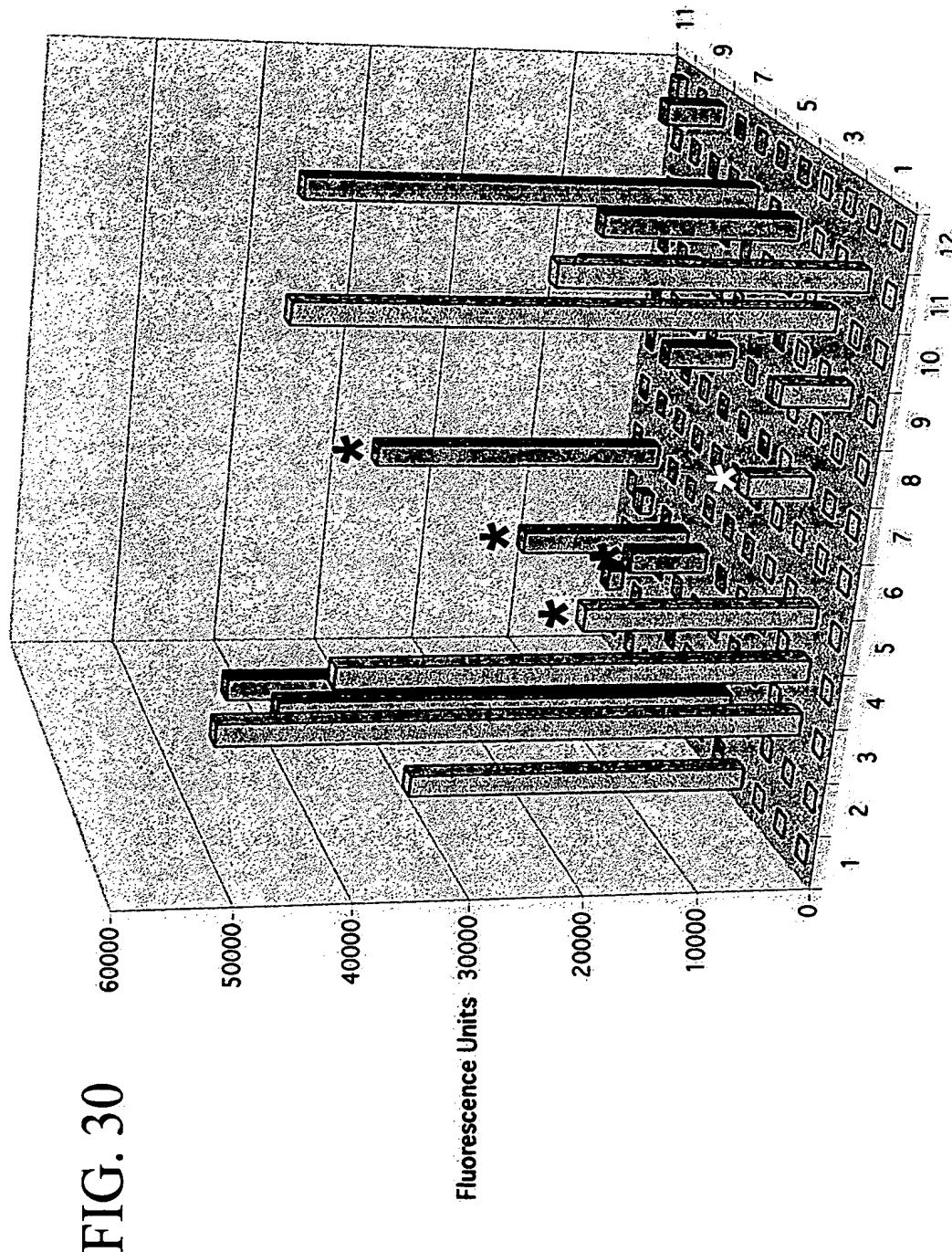
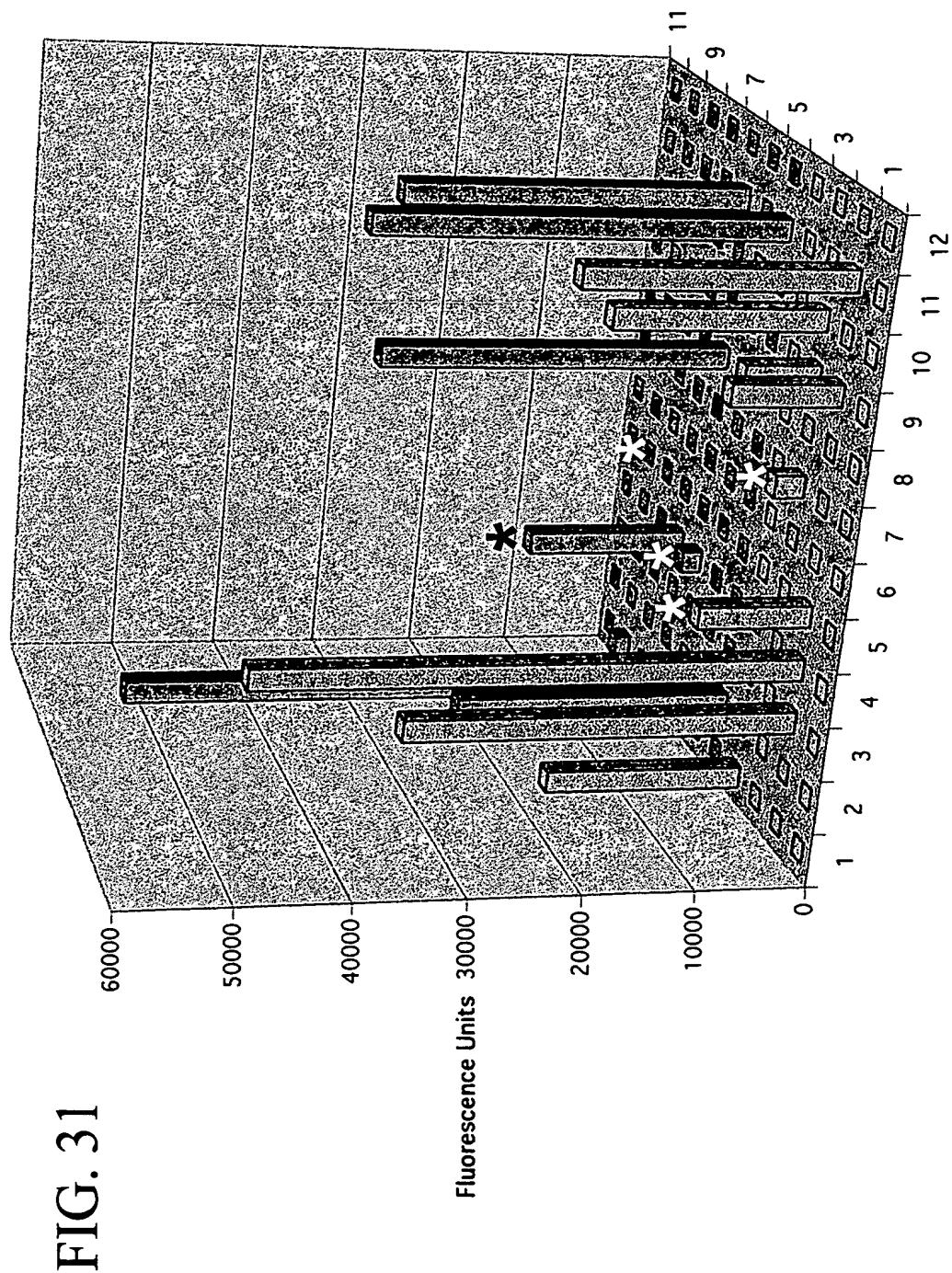
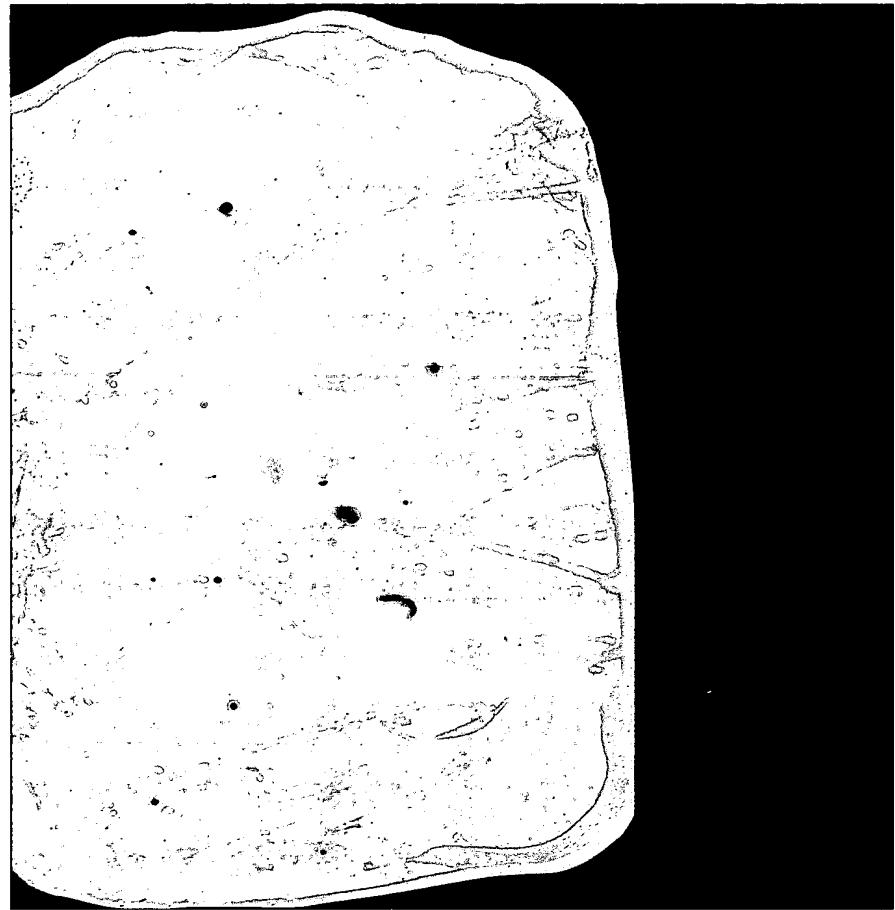


FIG. 29







**FIG. 32**

Origin = 4, 0 pixels  
(0.04, 0 mm)  
Size = 2180 x 1368 pixels  
(21.8 x 13.68 mm)  
Scaling = 10 $\mu$ m/pixel  
Scanner = GenePix 4100A 01 [92896]  
No averaging.  
PMT Gain = 600  
Laser Power = 100%  
Normalization Factor = 1  
Filter = 670DF40  
Focus Position = 0

}

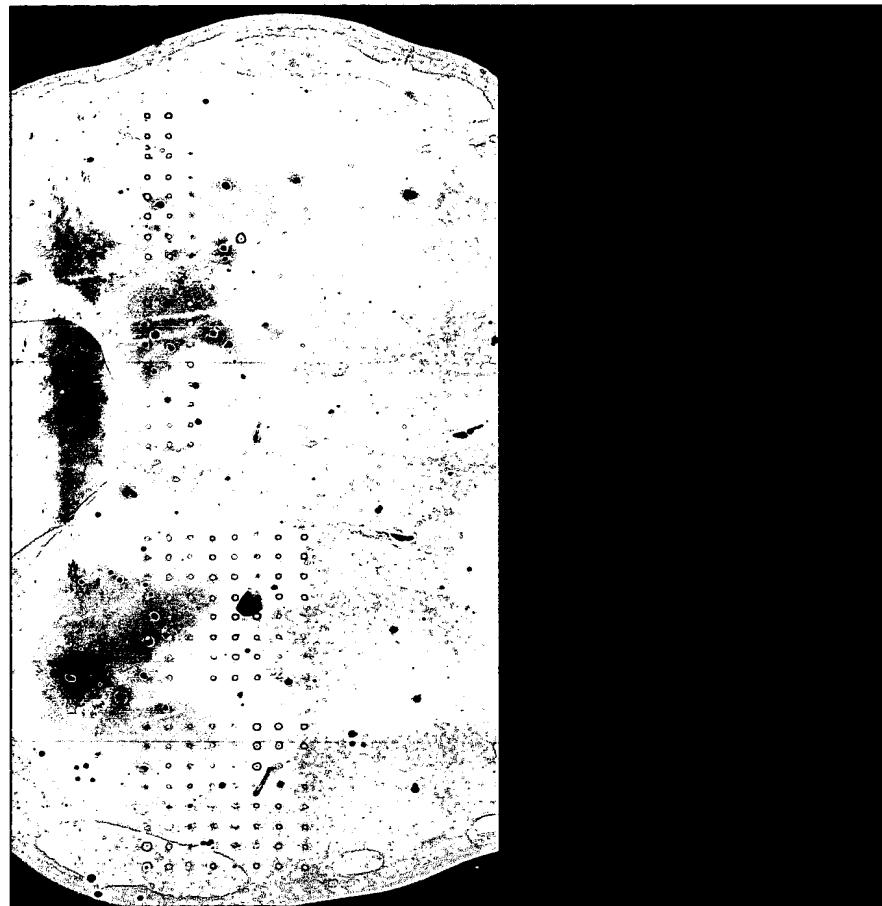


FIG. 33

Origin = 4, 0 pixels  
(0.04, 0 mm)  
Size = 2180 x 1068 pixels  
(21.8 x 10.68 mm)  
Scaling = 10 $\mu$ m/pixel  
Scanner = GenePix 4100A 01 [92896]  
No averaging.  
PMT Gain = 600  
Laser Power = 100%  
Normalization Factor = 1  
Filter = 670DF40  
Focus Position = 0

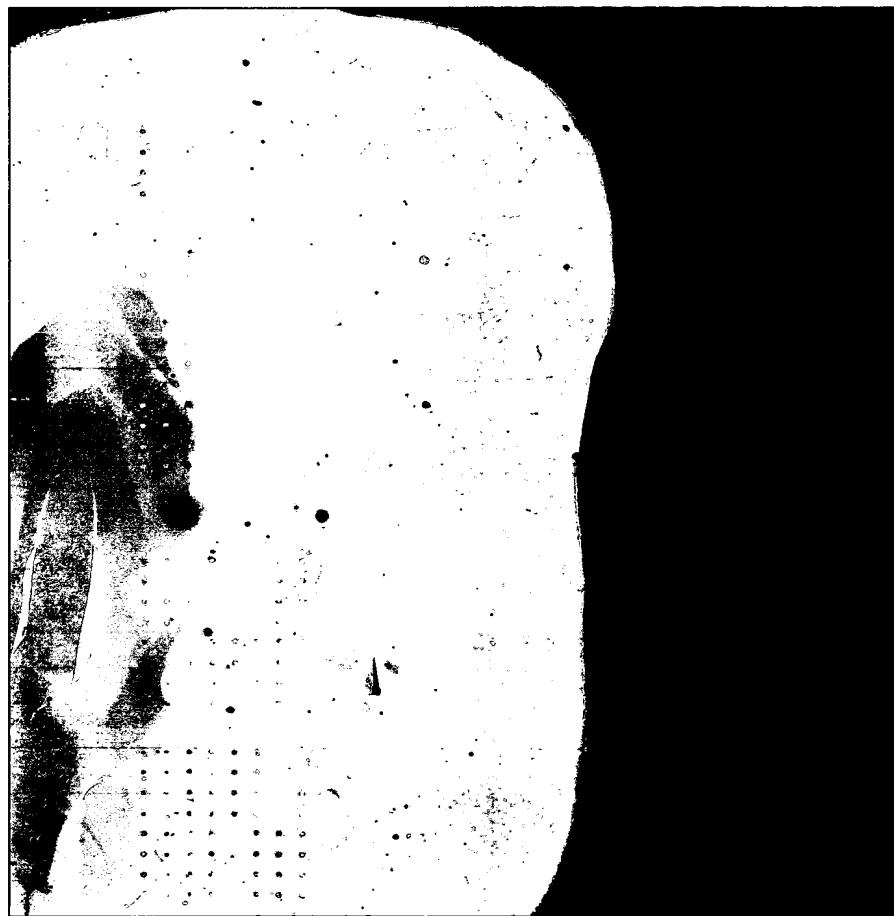


FIG. 34

Origin = 4, 0 pixels  
(0.04, 0 mm)  
Size = 2180 x 1368 pixels  
(21.8 x 13.68 mm)  
Scaling = 10 $\mu$ m/pixel  
Scanner = GenePix 4100A 01 [92896]  
No averaging.  
PMT Gain = 600  
Laser Power = 100%  
Normalization Factor = 1  
Filter = 670DF40  
Focus Position = 0

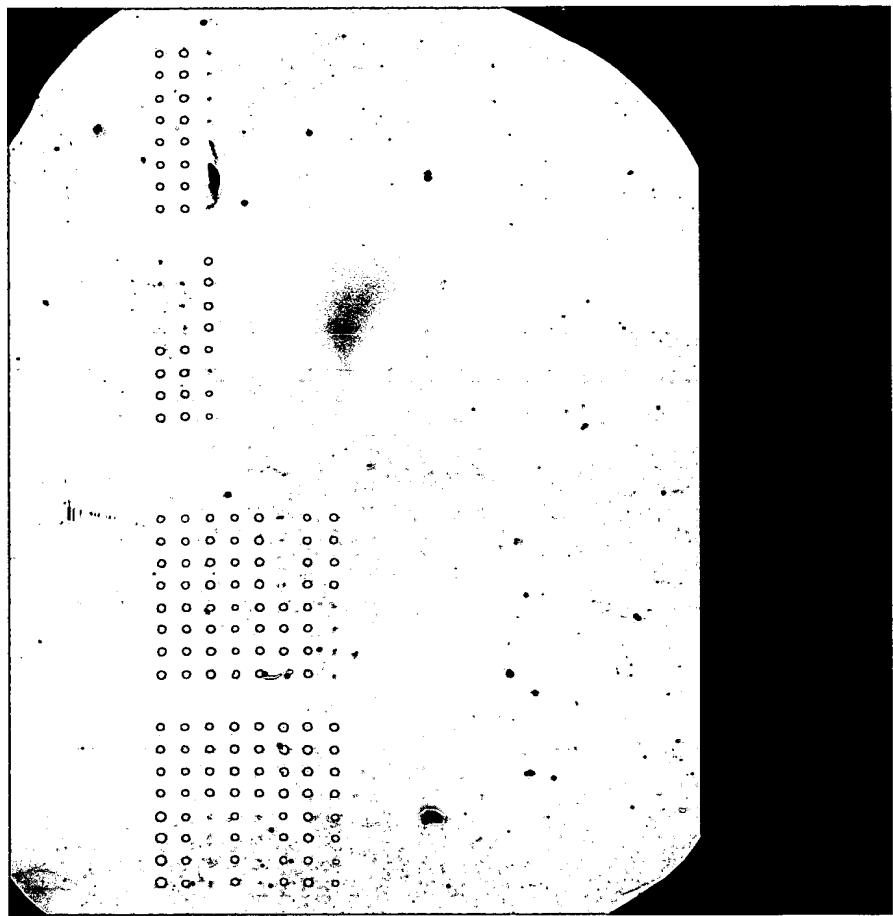
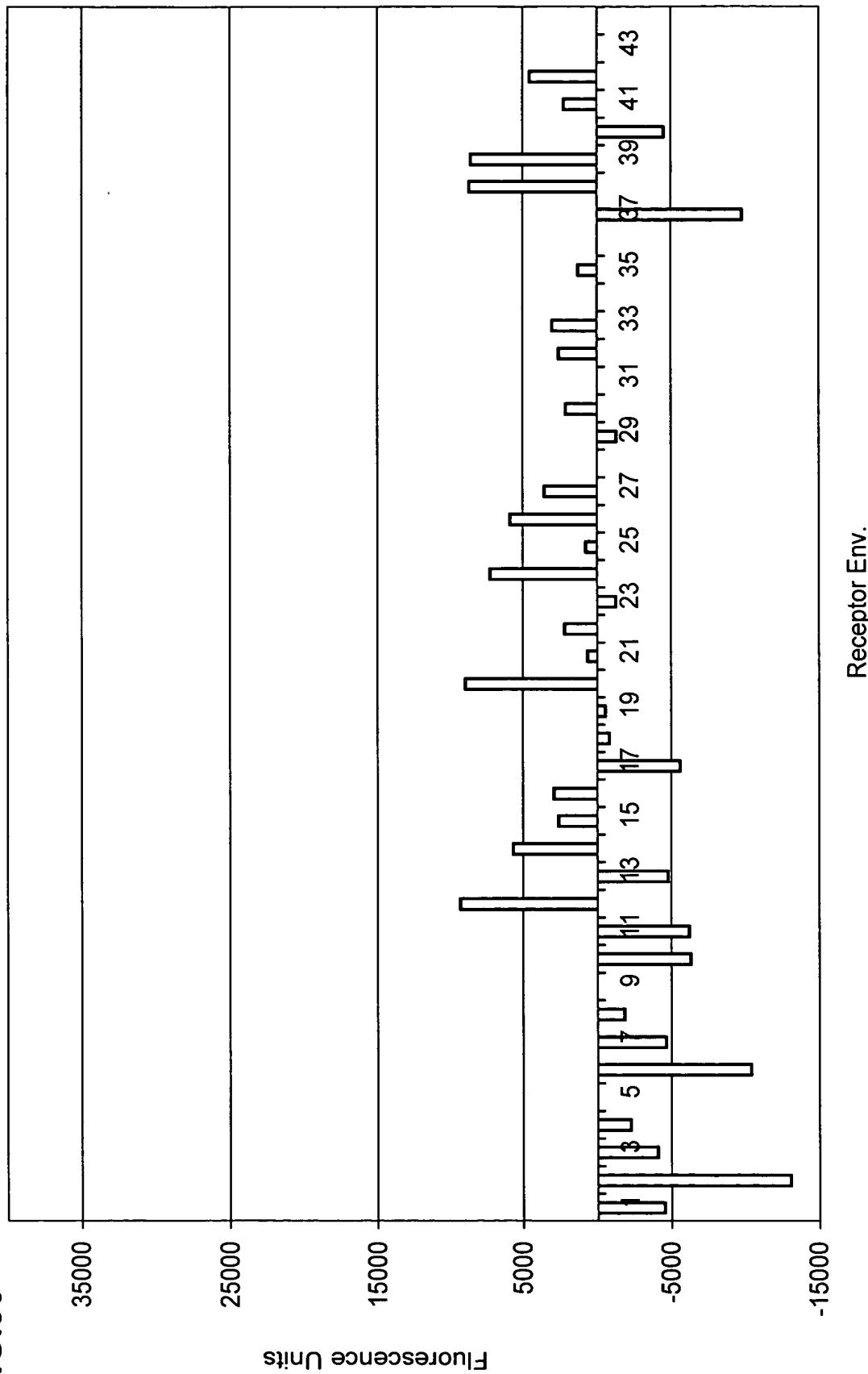
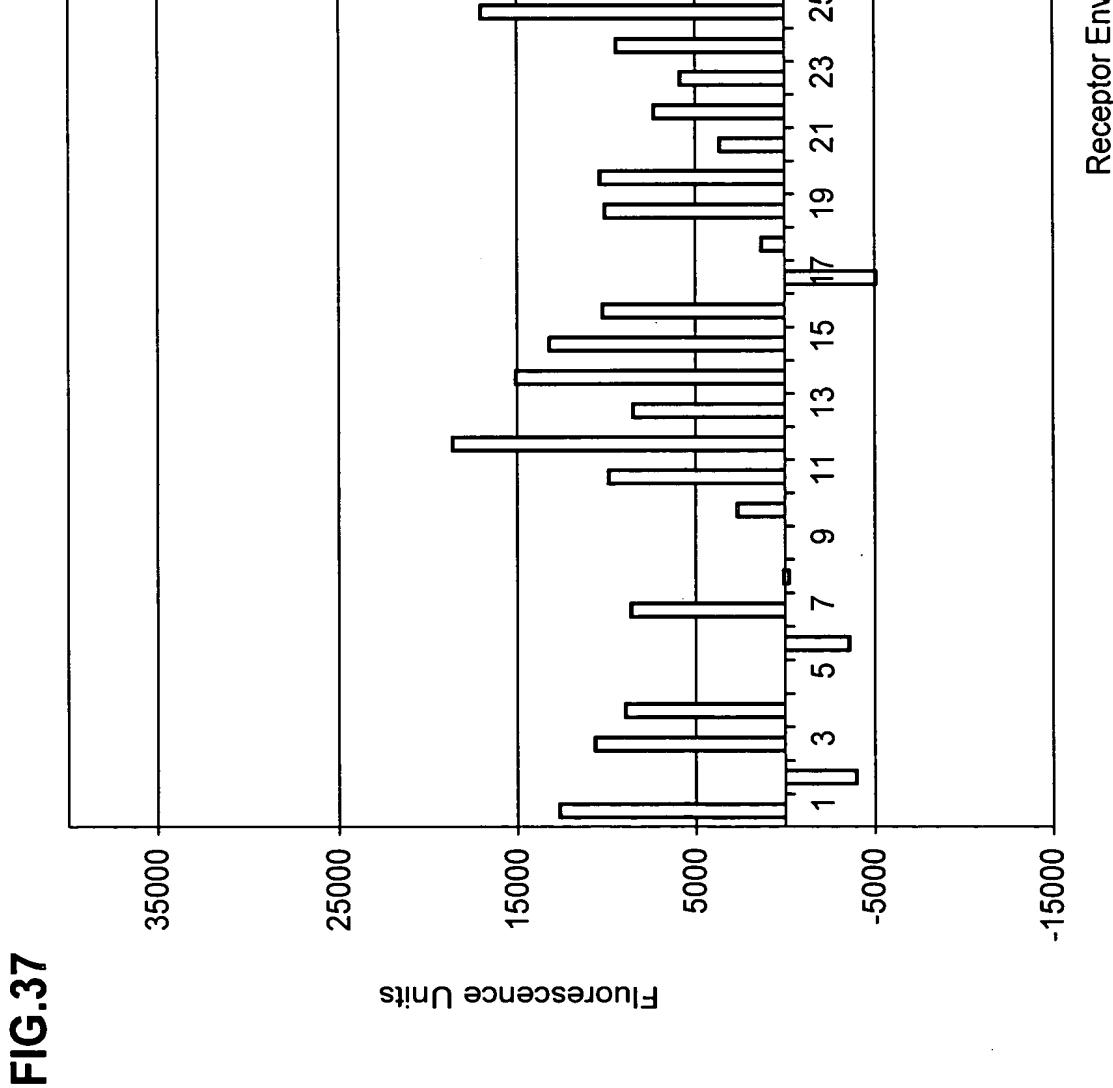


FIG. 35

Origin = 4, 0 pixels  
(0.04, 0 mm)  
Size = 2180 x 1368 pixels  
(21.8 x 13.68 mm)  
Scaling = 10 $\mu$ m/pixel  
Scanner = GenePix 4100A 01 [92896]  
No averaging.  
PMT Gain = 560  
Laser Power = 100%  
Normalization Factor = 1  
Filter = 670DF40  
Focus Position = 0

**FIG.36**





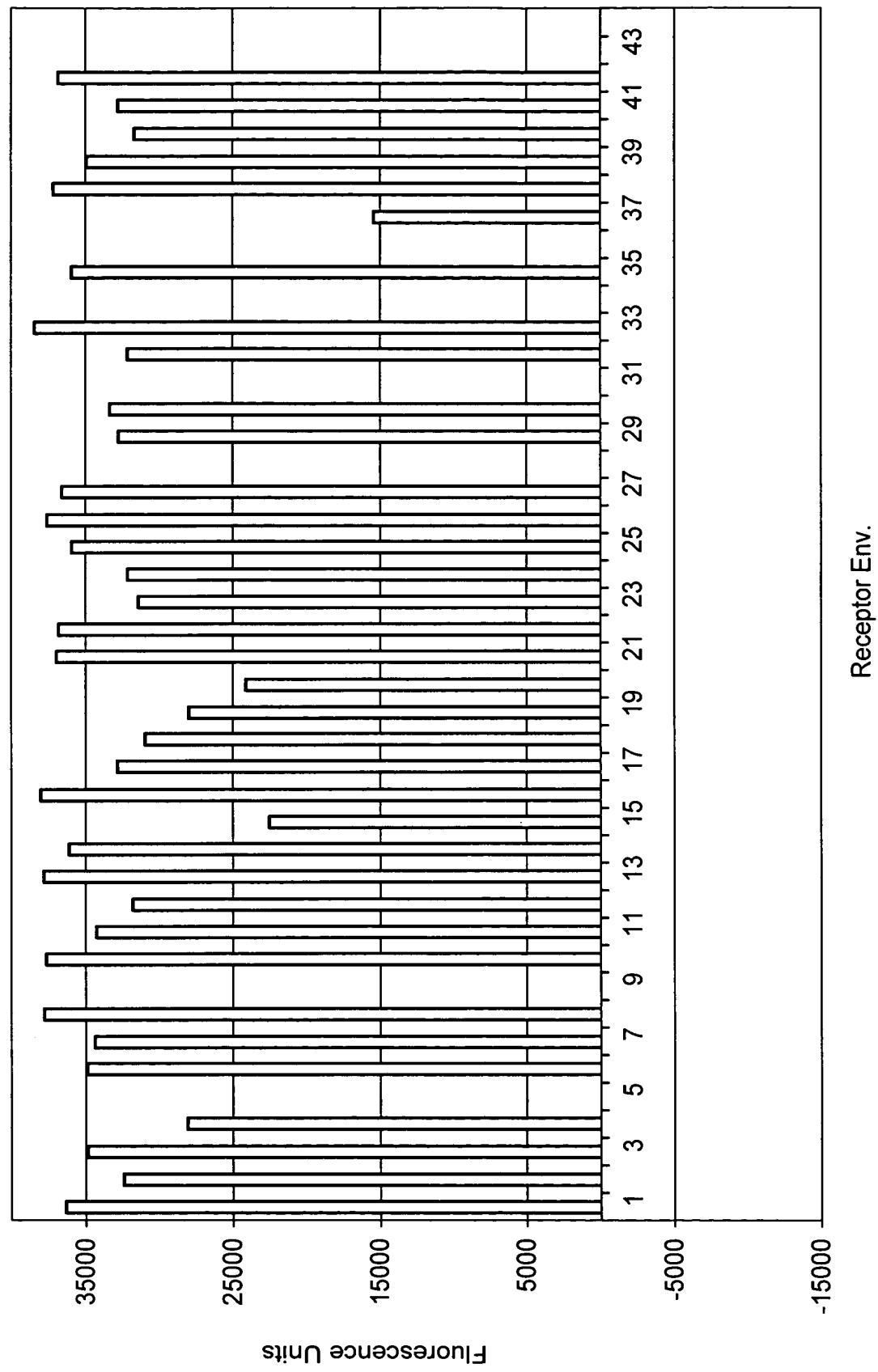
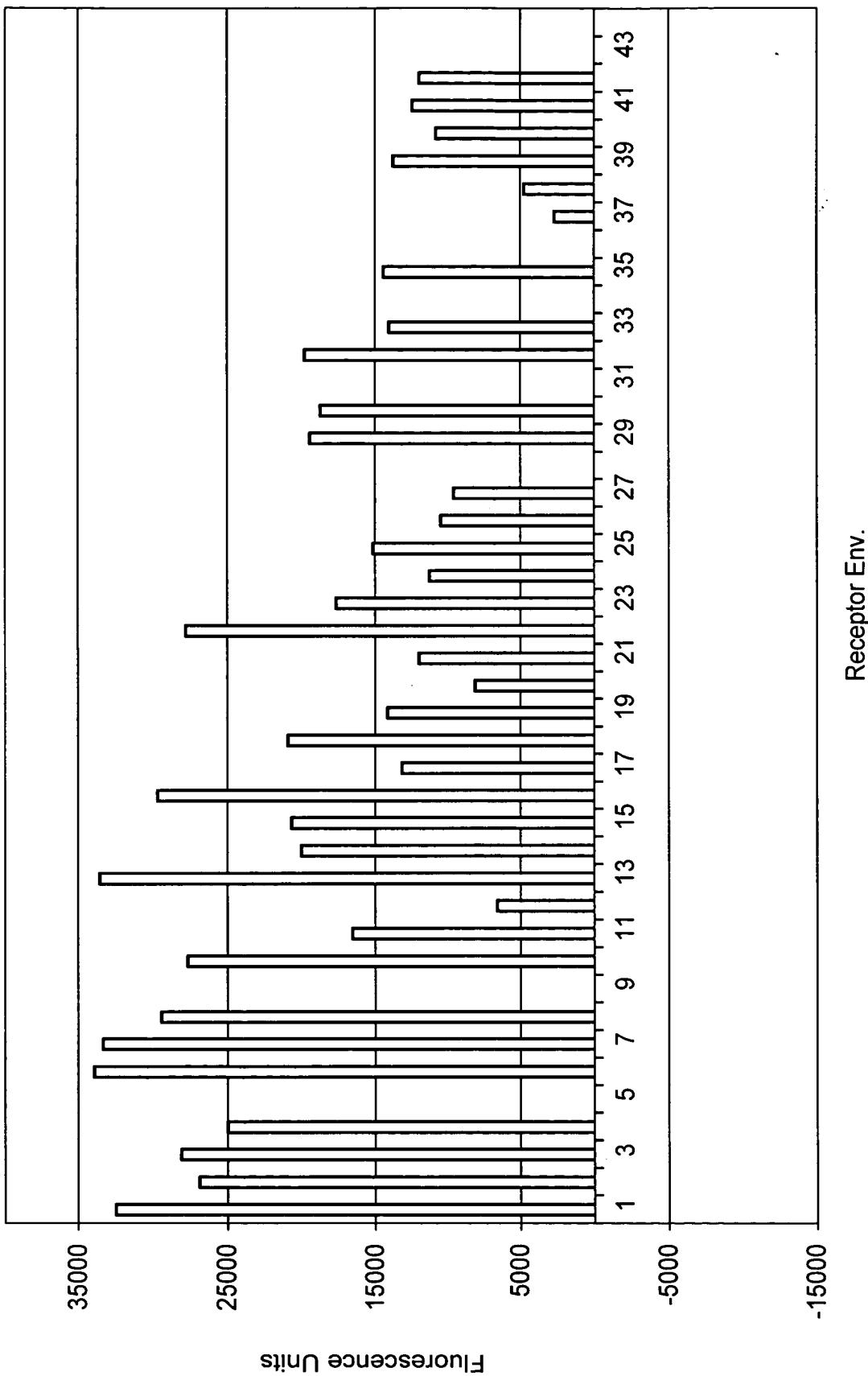


FIG.38

**FIG.39**



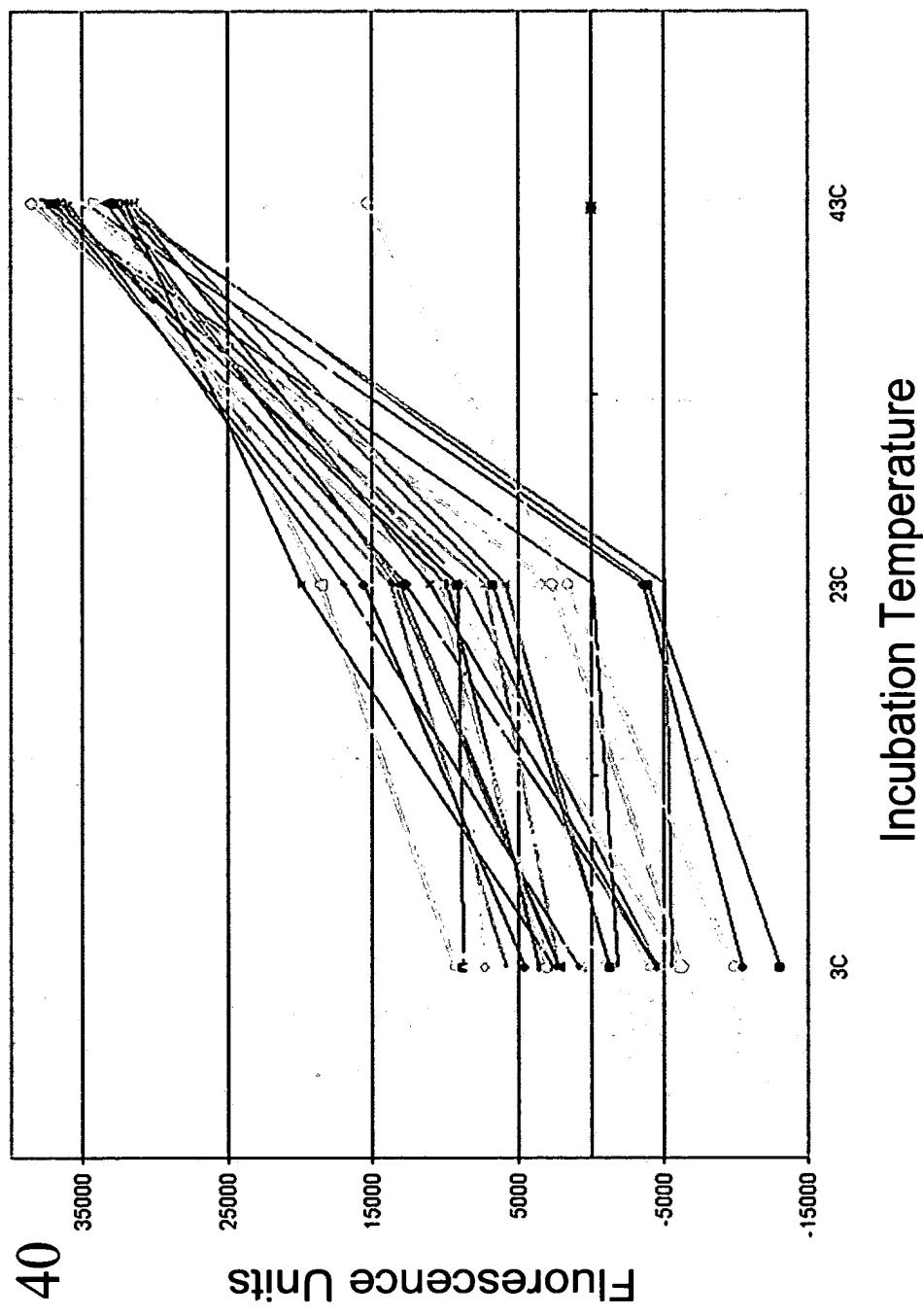


FIG. 40

**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- BLACK BORDERS**
- IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- FADED TEXT OR DRAWING**
- BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- SKEWED/SLANTED IMAGES**
- COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- GRAY SCALE DOCUMENTS**
- LINES OR MARKS ON ORIGINAL DOCUMENT**
- REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- OTHER:** \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.  
As rescanning these documents will not correct the image  
problems checked, please do not report these problems to  
the IFW Image Problem Mailbox.**